EV-C8E

SERVICE MANUAL

AEP Model
UK Model
E Model

AP1

October, 1985

Video 8

SPECIFICATIONS

System

Video recording system	Rotary two heads, Helical scanning FM system
Audio recording system	Rotary head, FM system
Video signal	PAL colour, CCIR standards
Usable cassettes	8 mm video format cassettes
Tape speed	SP: Approx. 20.051 mm/sec. LP: Approx. 10.058 mm/sec.
Recording or playback time	SP: 90 min. (P5-90) LP: 180 min. (P5-90)
Fast forward time	Approx. 3 min.

Input and output connector

MULTI CONNECTOR	24-pin Video input: 1 Vp-p, 75 ohms unbalanced, sync negative Video output: 1 Vp-p, 75 ohms unbalanced, sync negative Audio input: −6 dBs, input impedance more than 47 kilohms Audio output: −6 dBs, output impedance less than 1 kilohms
Earphone jack	Minijack, 8-ohm impedance
Remote jack	5-pin connector
12-pin connector	Conforms to 8 mm video specifications

General

Power requirements	MULTI connector 8.5 V Battery holder 6 V/8.5 V
Power consumption	2.9 W (battery operation)
Installation	Horizontally, vertically (battery operation)
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	−20°C to +60°C (−4°F to +140°F)
Dimensions	Approx. 180 × 72 × 171 mm (w/h/d) ($7^1/_8 \times 2^7/_8 \times 6^3/_4$ inches) Excluding carrying handle and projections on the bottom
Weight	Approx. 1.1 kg (2 lb 7 oz) Excluding the battery and cassette Approx. 1.5 kg (3 lb 5 oz) Including the battery and cassette

Accessory supplied

RFU adaptor RFU-85 or 85AS with
Aerial selector ANS-33
75-ohm aerial cable (2)

— Continued on next page —

8 VIDEO CASSETTE RECORDER

SONY®

MICROFILM

Consumer VIDEO

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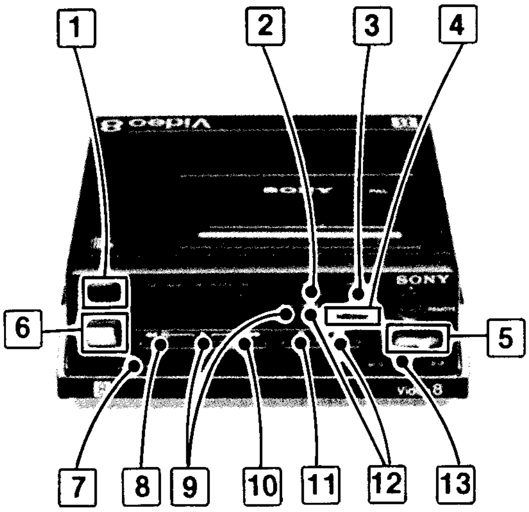
SECTION 1
GENERAL

1-1. LOCATION AND FUNCTION OF PARTS AND CONTROLS

For details on the use of each control, refer to the pages indicated in the circles.

A-1



A-1

1 **POWER switch and lamp**

2 **RESET button ⑫**
Press to reset the counter to "0000".

3 **MEMORY button ⑫**
To return the tape to the "0000" point, press this button and the MEMORY mark appears. Then press the ▶▶ or ◀◀ button.

4 **INSERT button and lamp ⑮**
Press to insert a recording onto a previously-recorded tape when the recorder is set in the playback pause mode.

5 **● (record) switch and lamp ⑪**
Slide to the right to start recording.

6 **EJECT button and lamp ⑦**

7 **EDIT switch ⑬**
Normally keep this switch at the left position. When editing a tape onto another recorder, set the switch to the right "EDIT" position.

8 **◀◀ (rewind) button ⑨**

9 **▶ (play) button and lamp ⑨**

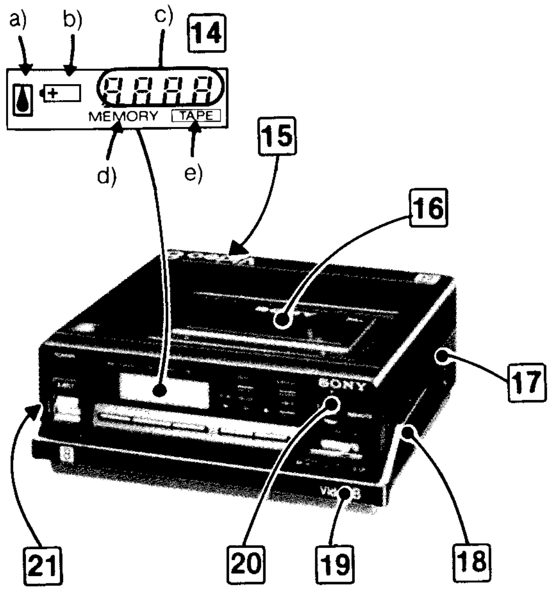
10 **▶▶ (fast forward) button ⑨**

11 **■ (stop) button**

12 **II (pause) button and lamp ⑨ ⑪**

13 **Recording mode switch**
This selects the recording speed, SP or LP. The recording time of a cassette in the LP mode is 2 times that in the SP mode.
The playback speed is automatically set regardless of the position of this switch.

A-2



A-2

14 Display window

a) Blinks when moisture has condensed inside the unit.
b) Blinks when the inserted battery is exhausted.
c) The counter changes as the tape moves.
d) Indicates that the MEMORY function is activated.
e) Blinks slow when the tape is near at its end during recording. Blinks fast when the tape has been at its end.

15 BATTERY compartment and battery ejector (rear)
Insert an NP-22 battery pack, ACP-85 series ac pack, or DCP-85 dc pack.

16 Cassette compartment

17 12-pin connector
Provided for future use.
Remove the cap before using the connector.

18 MULTI CONNECTOR (24-pin)
Connect an RFU-85 series RFU adaptor, AC-V8 series ac power adaptor, or TT-V8 series tuner timer unit.

19 Carrying handle
Pull out to use.

20 REMOTE connector (5-pin)
Connect an RM-84 wired Remote Commander or RM-E100V editing controller.

21 🎧 (earpiece) jack (minijack)
Connect an earpiece to monitor the sound.

1-2. POWER SOURCES

SELECTION OF POWER SOURCES

Operate the unit on one of the following power sources. This manual shows the operations on the battery pack, the ac pack and the car battery. For operation on other power sources, see the instruction manual furnished with the equipment to be used.

Place	Accessory to be used
Outdoors	Battery pack NP-22
Indoors (house current)	AC pack ACP-85E/85UB/ 85AS*
	Tuner timer unit TT-V8EC/V8UB/V8AS *
	AC power adaptor AC-V8E/V8UB *
In the car	DC pack DCP-85 and car battery cord DCC-16AE

When the TT-V8 series is connected
The following operations are possible.

- Power supply for the EV-C8E
- Battery charge
- Playback of a tape
- TV programme recording
- Timer recording
- Tape editing

For details on connections and operations, please read the instruction manual furnished with the TT-V8 series.

When the AC-V8 series is connected
The following operations are possible.

- Power supply for the EV-C8E
- Battery charge
- Playback and recording of a tape
- Tape editing

For details on connections and operations, please read the instruction manual furnished with the AC-V8 series.

* Operating voltage of each unit is as follows:

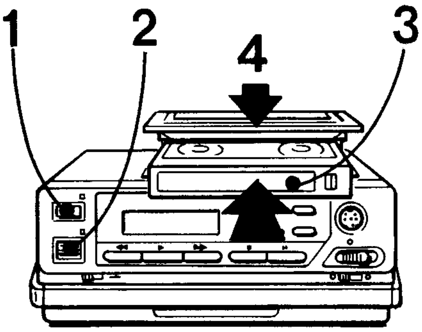
220 V ac	ACP-85E, AC-V8E, TT-V8EC/V8SA
240 V ac	ACP-85UB/85AS, AC-V8UB, TT-V8UB
100-240 V ac	ACP-88 (available in the near future)

Before operating, check that the operating voltage is identical to those of your local power supply.

1-3. CASSETTE CARE

First of all, connect the power source.
Always insert a cassette in the correct direction. Never insert it upside down.

B-1



CASSETTE INSERTION B-1

1 Press the POWER switch to turn on the power.
2 Press down the EJECT button and the cassette compartment will pop up.
3 Insert a cassette with the window upwards and the arrow mark in front.
4 Push down the cassette compartment.

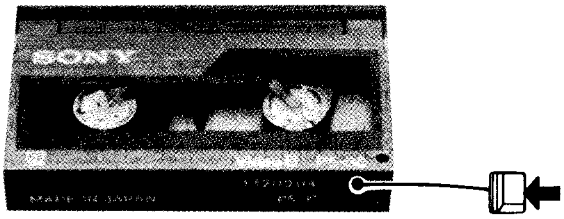
CASSETTE EJECTION

1 Turn on the power.
2 Press down the EJECT button.
3 Take the cassette out and push down the cassette compartment.

THE TAB ON THE CASSETTE B-2

(The photo is Sony type.)

B-2



When a new recording is made on a previously recorded cassette, the previous recording will be automatically erased. To avoid erasing a recording, slide the tab out to cover the opening.
When the tab is out, a recording cannot be made. To re-record on a cassette, slide the tab in.

Note
Never insert anything in the small holes on the rear of the cassette. These holes are used to sense the kind of tape, thickness of tape, if the tab is out or in, etc.

1-4. PLAYBACK OF THE RECORDED TAPE

CONNECTION

Connections 1 through 3 are only for viewing tapes or TV programmes. When you are away from home and want to see the playback picture with an available TV, select one of the three ways.

Connection	Place/Power source	Possible operation
1 Connecting a TV without audio/video input jacks	Indoors/House current	● Viewing a TV programme ● Viewing a playback picture
2 Connecting a portable TV with audio/video input jacks	Outdoors/Battery pack In the car/12 V or 24 V car battery	● Viewing a TV programme ● Viewing a playback picture
3 Connecting a TV with audio/video input jacks	Indoors/House current	● Viewing a TV programme ● Viewing a playback picture

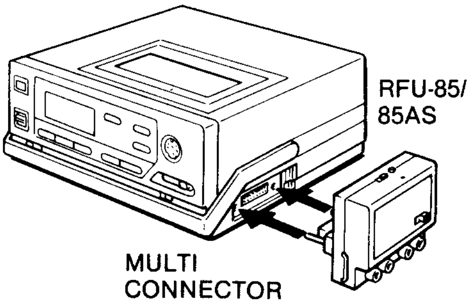
Preparation C-1

Before making connections, be sure to unplug the ac power cords of all the equipment. Connect the RFU-85 series RFU adaptor to the MULTI CONNECTOR of the recorder and insert the ACP-85 series ac pack, NP-22 battery pack, or DCP-85 dc pack with the DCC-16AE car battery cord into the battery holder.

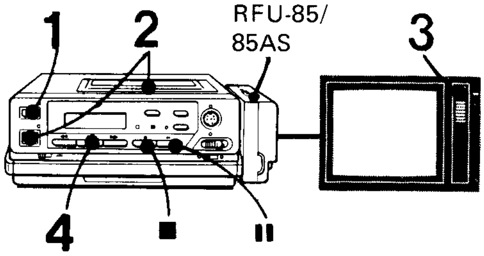
Caution

When connecting the RFU adaptor, carefully align the guide pins of the RFU adaptor with the holes of the MULTI CONNECTOR.
Do not jam the RFU adaptor in as this may damage the pins of the MULTI CONNECTOR.

C-1



C-2



OPERATION C-2

1 Turn on the power.
2 Insert a cassette.
3 Turn on the TV or monitor.
When a TV without audio/video input jacks is connected, select the programme position which is adjusted for the recorder. If you are not sure how to adjust your TV, please refer to the TV's instruction manual or consult your dealer.
When a TV/monitor with the audio/video input jacks is connected, set the input selector on the TV/monitor to the VIDEO mode.
4 Press the ▶ button.
The lamp lights and the playback starts.

To stop the playback, press the ■ button.

When the tape comes to an end, the unit automatically stops.

To obtain a still picture

Press the ❚❚ button during playback.
Streaks will appear in the still picture. The sound will be muted. To resume normal playback, press the ❚❚ button again.
When the pause mode lasts for more than approximately 7 minutes, the pause mode will be automatically released and the unit will be set in the stop mode.

Note

When a tape is recorded in the SP mode, a still picture may be noisy with many streaks and become black-and-white.

To view the picture at high speed

Keep pressing the ▶▶ or ◀◀ button during playback. For high-speed playback picture in the forward direction, press the ▶▶ button. For high-speed playback picture in the reverse direction, press the ◀◀ button.
Streaks will appear in the high-speed pictures. The sound will be muted.
Release the button for normal playback.

Note

When a tape is recorded in the SP mode, a high-speed picture may be played back sometimes in black-and-white and streaks will be wider than those of the LP recorded tape.

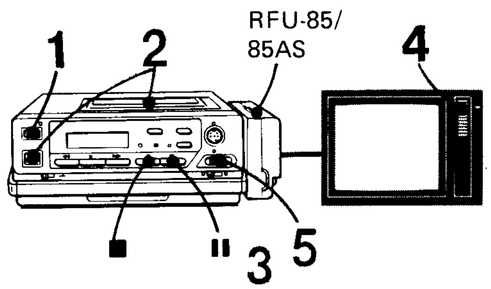
1-5. TV PROGRAM RECORDING

CONNECTION

Connections 4 through 8 make both TV programme viewing/recording and tape playing possible.

Connection	Place/Power source	Possible operation
4 Connecting a TV with audio/video input/output jacks, or a colour monitor and a TV tuner	Indoors/House current	● Viewing a TV programme ● Recording a TV programme ● Viewing a playback picture
5 Connecting another VTR without an input selector	Indoors/House current	● Viewing a TV programme ● Recording a TV programme ● Viewing a playback picture ● Editing
6 Connecting another VTR with an input selector	Indoors/House current	● Viewing a TV programme ● Recording a TV programme ● Viewing a playback picture ● Editing
7 Connecting a tuner timer unit and another VTR with an input selector	Indoors/House current	● Viewing a TV programme ● Recording a TV programme ● Timer recording ● Viewing a playback picture ● Editing ● Remote control
8 Connecting an ac power adaptor and another VTR with an input selector	Indoors/House current	● Viewing a TV programme ● Recording a TV programme ● Viewing a playback picture ● Editing

D



OPERATION D

1 Turn on the power.
2 Insert a cassette.
3 Set the recording mode switch to the proper position according to the length of the programme to be recorded.
4 Select the programme to be recorded with the programme select button on the TV, TV tuner or the VTR connected.
For setting of selector switches, refer to "Quick guide to connections".
5 Slide the ● switch to the right.
The lamp lights and recording starts.

To stop the recording, press the ■ button.

To stop the recording momentarily

Press the II button. The TV programme can be seen on the TV/monitor but the picture will not be recorded.

To resume recording, press the II button again.

When the recording pause mode lasts for approximately 7 minutes, the pause mode will be automatically released and the unit will be set in the stop mode.

- When the tape comes to an end, the "TAPE" mark will blink slow in the display window. When the tape has ended, the unit will be automatically set in the stop mode and the "TAPE" mark will blink fast.

Recording one TV programme while viewing another

Select the desired programme on the TV.

1-6. USE OF THE TAPE COUNTER

TO INDEX THE WHOLE TAPE

When the unit is turned on, the tape counter will appear in the display window. Press the RESET button at the beginning of the tape so that the counter shows "0000". By noting the counter reading at a particular point, you can easily find that point later by referring to the tape counter.
Write the counter readings you want to remember on the label of the cassette.

TO RETURN TO A PRE-REGISTERED POINT

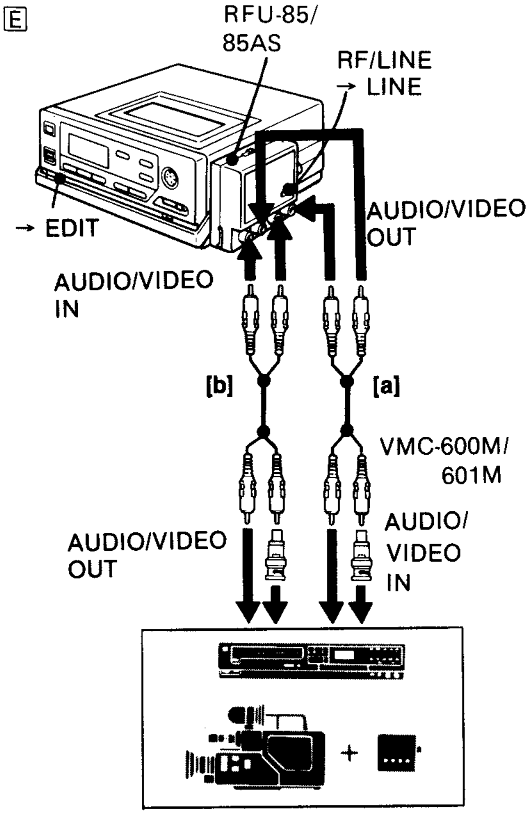
During recording or playback, press the RESET button at the point you later want to locate. The counter will be set at "0000".

1. Press the ■ button to stop the tape, when the recording or playback has finished.
2. Press the MEMORY button and the "MEMORY" mark will appear in the display window.
3. Press the ▶▶ or ◀◀ button.
   The tape will be sent forward or in reverse and stop automatically when the counter reaches "0000".

Notes

- While the "MEMORY" mark appears in the display window, the counter cannot be reset to "0000", therefore, press the MEMORY button to cancel the function and then press the RESET button.
- The counter reading and the point of the tape may not correspond exactly.

1-7. EDITING 🄴



To edit a home movie tape you will need another VTR or video camera recorder.
An 8 mm format cassette can be edited to a β format cassette, and vice versa.
Connect the RFU adaptor to the EV-C8E before making the other connections.

1. **To transfer the original tape from the EV-C8E to the tape on another VTR or video camera recorder,** connect the AUDIO/VIDEO OUT jacks of the RFU adaptor to the AUDIO/VIDEO IN jacks of the recorder, set the RF/LINE selector on the RFU adaptor to LINE and set the EDIT switch to the right "EDIT" position. **[a]**
   To transfer the original tape from another VTR or video camera recorder to the tape on the EV-C8E, connect the AUDIO/VIDEO IN jacks on the RFU adaptor to the AUDIO/VIDEO OUT jacks of the recorder. **[b]**
2. Turn on the power of the equipment.
3. Start editing.

Notes

- The optional RM-E100V video editing controller allows easier editing between two VTRs.
- The required connecting cords may differ depending on VTRs. Refer to the instruction manual of the VTR.
- If you have set the EDIT switch to the "EDIT" position, be sure to return the switch to the left position when you are through editing.

FUNCTION OF THE EDIT SWITCH

Set this switch to the "EDIT" position when recording the playback of this video cassette recorder with another recorder. Signal loss that results from the tape-to-tape transfer will be reduced and the playback signals of this video cassette recorder will be transferred more accurately.
When using this video cassette recorder for recording or for normal playback, keep this switch to the left position.

1-8. INSERT RECORDING

You can insert (record) video and audio simultaneously from a TV or a VTR onto any recorded tape.

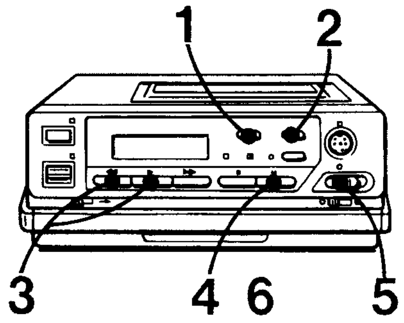
PREPARATION

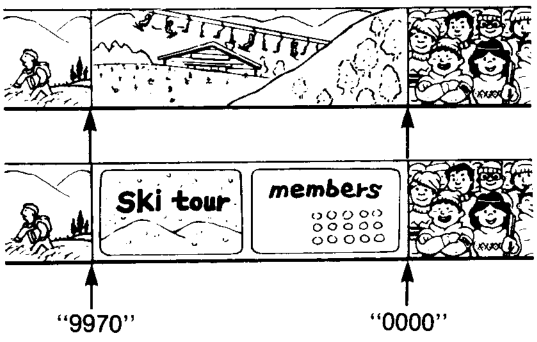
Make the necessary connections. For details on each connection and operation, refer to the corresponding page.

To insert a TV programme (page 10)
Make the necessary connections as described in TV programme recording.

To insert a recording from another VTR (page 13)
Make the necessary connections as described in editing.

F





OPERATION F

Monitor the playback picture of the recorded tape and decide where the insertion should be made.

1 Find the position for the end of the insert and press the RESET button. The counter returns to "0000".
2 Press the MEMORY button. The "MEMORY" mark appears on the display window.
3 Rewind the tape back past where the insert should begin (e.g. "9970") by pressing the ◀◀ button during playback.
4 Release the ◀◀ button and press the ❚❚ button at the place the insert should begin. The unit is set in the playback pause mode.
5 Press the INSERT button. The unit is set in the insert pause mode. The ▶ lamp goes out and the INSERT and the ❚❚ lamp will light.
6 Play the inserting source of the connected equipment and press the ❚❚ button.
The insert recording will start and the counter reading will increase.
The insert recording stops at the counter reading "0000" and the INSERT lamp goes out.

Instead of deciding the point where the insert should end, as described in step 1, you may wish to continue the insertion and stop it at a suitable point while monitoring the inserted recording. In this case, start operating from step 3. Proceed with the remaining steps and stop the insertion by pressing the ■ button.

When the pause mode lasts for approximately 7 minutes, the pause mode will be automatically released and the unit will be set in the stop mode.

1-9. NOTE ON MOISTURE CONDENSATION

MOISTURE INSIDE THE UNIT

If the unit is brought directly from a cold to a warm location, moisture may condense on the drum assembly inside the unit. In this condition, the tape may adhere to the head drum.
Take the cassette away.
To prevent possible damage under these circumstances, the unit is furnished with a moisture sensor. If moisture is present, the 💧 mark will blink when the power is turned on and the function buttons except for the EJECT button will not work. When a cassette has been inserted, the 💧 mark and the EJECT lamp will blink and the tape will be automatically unloaded.

If the 💧 mark blinks, eject the cassette and proceed as required.

When a battery pack is used as the power source
Turn off the unit and let the unit sit with the cassette compartment open until the moisture evaporates and the 💧 mark goes out when the power is turned on. In case the 💧 mark does not go out in a few hours, use an ac power adaptor or a dc pack as the power source.

When an ac power adaptor or a dc pack is used as the power source
Leave the unit turned on, so that the heater built in the recorder will activate to make the moisture evaporate.

When the moisture has completely evaporated, the 💧 mark will go out. Then operate the unit as usual.

MOISTURE ON THE TAPE

If a tape is brought directly from a cold to a warm location, moisture may condense on the surface of the tape. When the tape is inserted and a tape transport button (such as the ▶ button) is pressed, the EJECT lamp will blink and the function buttons except for the EJECT button will not work. In this case the 💧 mark will not appear.

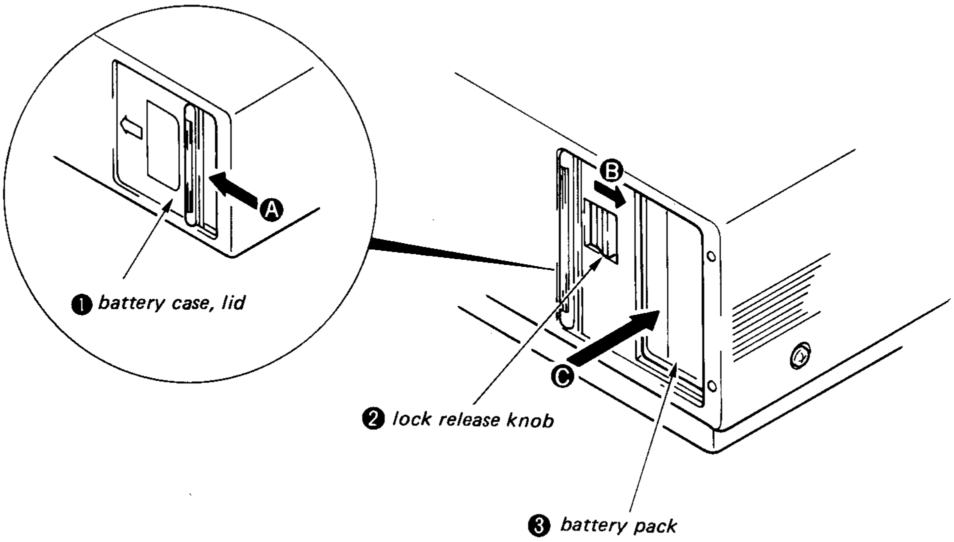
If the EJECT lamp blinks, eject the cassette and let the unit and the cassette sit until the moisture evaporates.

When to use
The unit can be used again if the EJECT lamp does not light when a cassette is inserted and a tape transport button is pressed.

SECTION 2
DISASSEMBLY

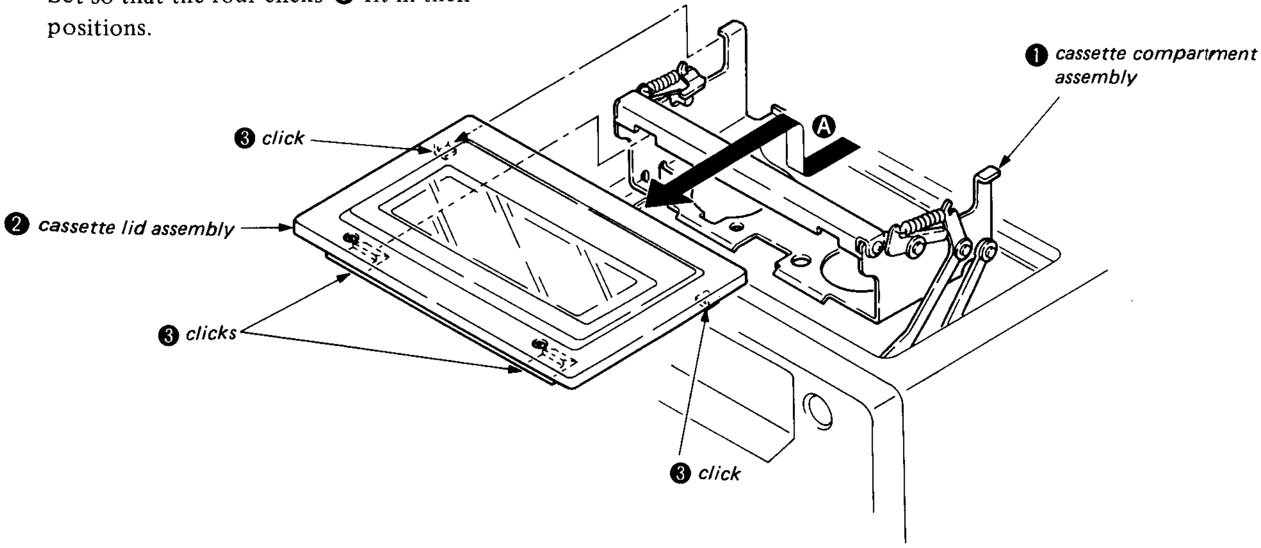
2-1. REMOVAL OF THE BATTERY PACK

1) Open the battery case lid ❶ in the direction shown by the arrow Ⓐ .
2) Press the lock release knob ❷ in the direction shown by the arrow Ⓑ and push the battery pack ❸ in the direction shown by the arrow Ⓒ until a clicking tone is audible.
3) Remove the battery pack ❸ pushed out by a spring force.


Ⓐ
❶ battery case, lid
Ⓑ
Ⓒ
❷ lock release knob
❸ battery pack

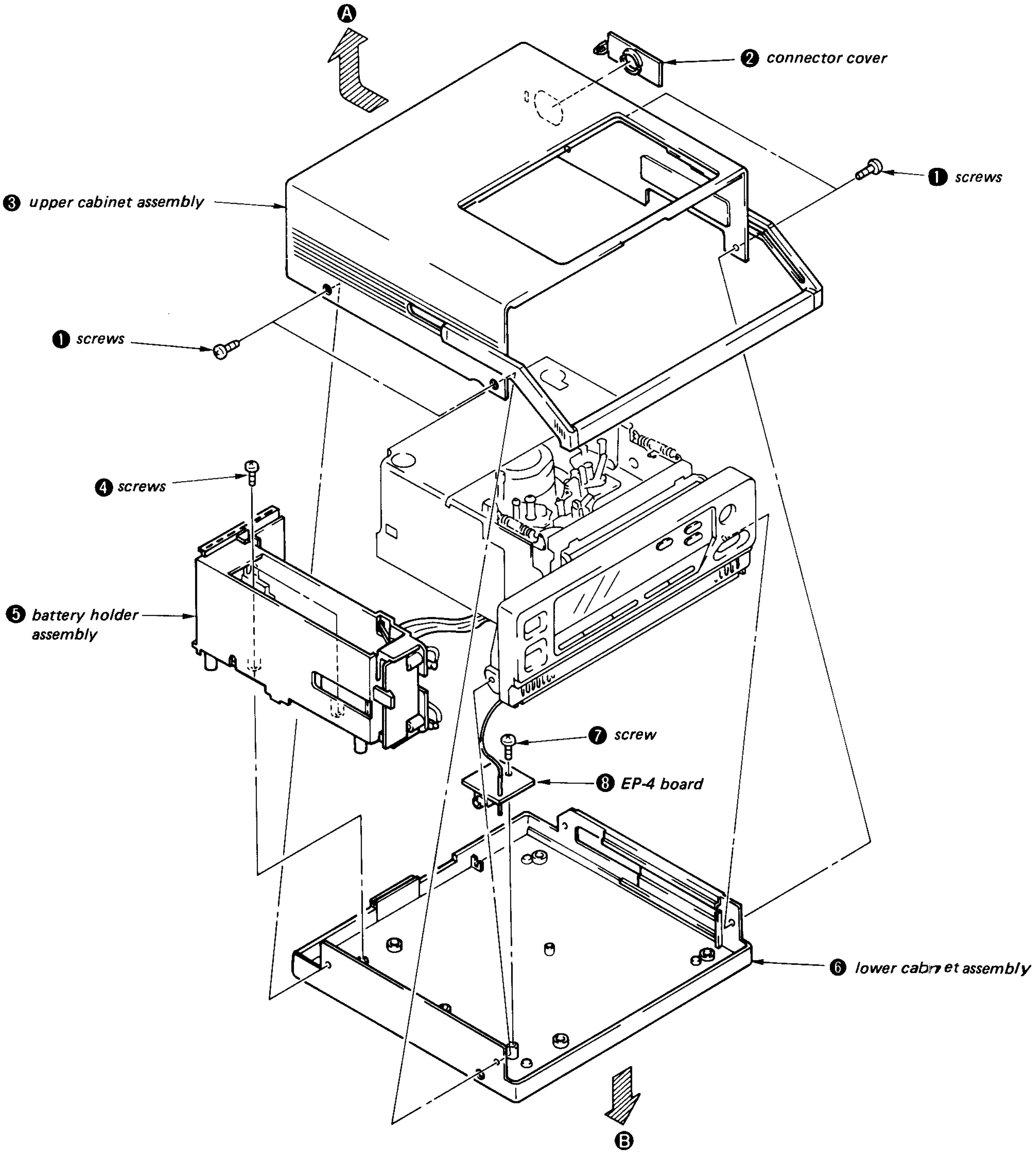
2-2. REMOVAL OF THE CASSETTE LID ASSEMBLY

1) Turn on power and press the EJECT button to lift the cassette compartment assembly ❶.
2) Slide the cassette lid assembly ❷ in the direction shown by the arrow Ⓐ and remove it.
   * Set so that the four clicks ❸ fit in their positions.


❶ cassette comparment assembly
❸ click
Ⓐ
❷ cassette lid assembly
❸ clicks
❸ click

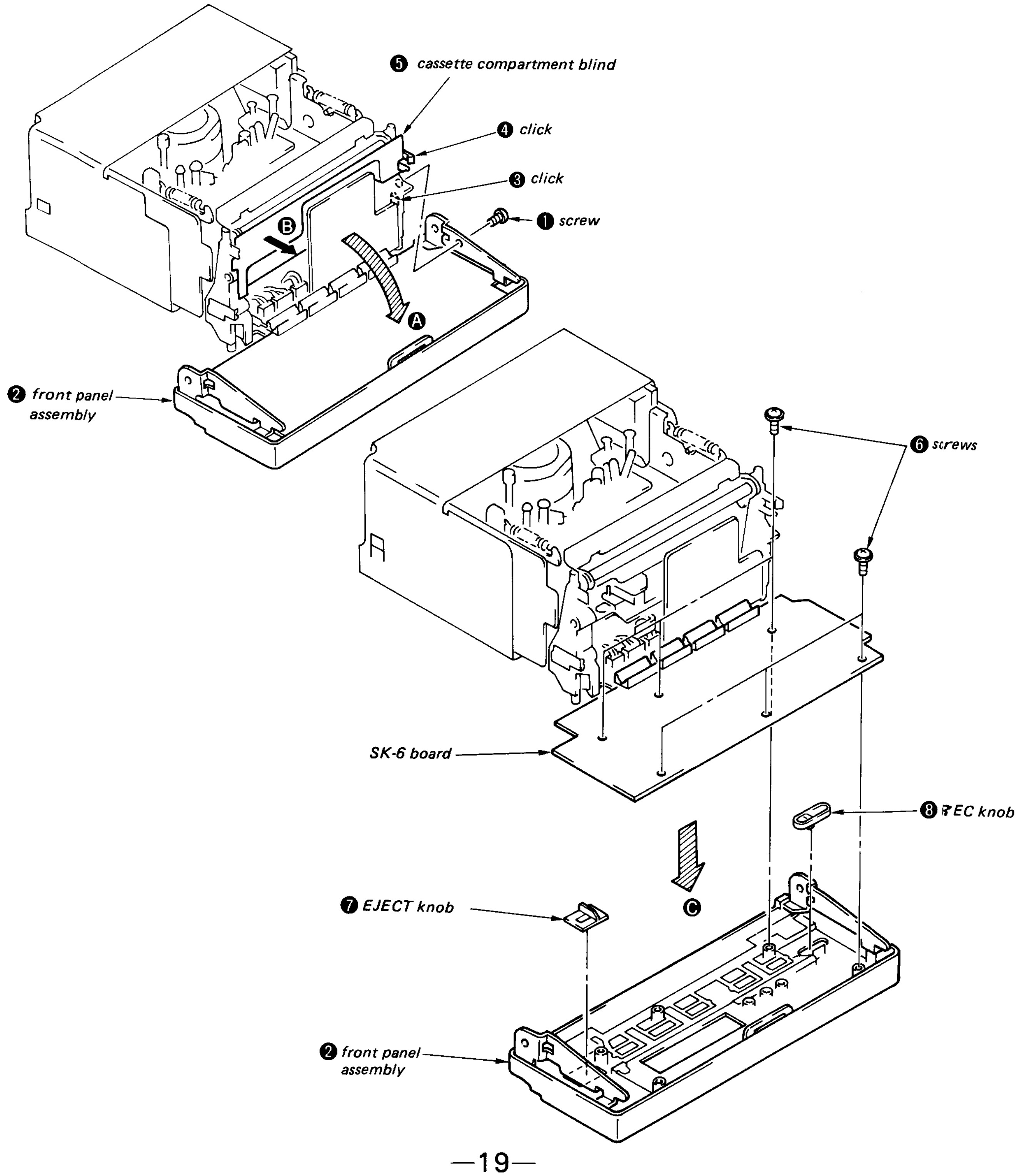
2-3. REMOVAL OF THE CABINET

1) Remove the four screws ❶ and remove the connector cover ❷.
2) Remove the upper cabinet assembly ❸ in the direction shown by the arrow Ⓐ.
3) Remove the two screws ❹ and remove the battery holder assembly ❺ from the lower cabinet assembly ❻.
4) Remove the screw ❼ and remove the EP-4 board ❽ from the lower cabinet assembly ❻.
5) Remove the lower cabinet assembly ❻ in the direction shown by the arrow Ⓑ.


Ⓐ
❷ connector cover
❶ screws
❸ upper cabinet assembly
❶ screws
❹ screws
❺ battery holder assembly
❼ screw
❽ EP-4 board
❻ lower cabinet assembly
Ⓑ

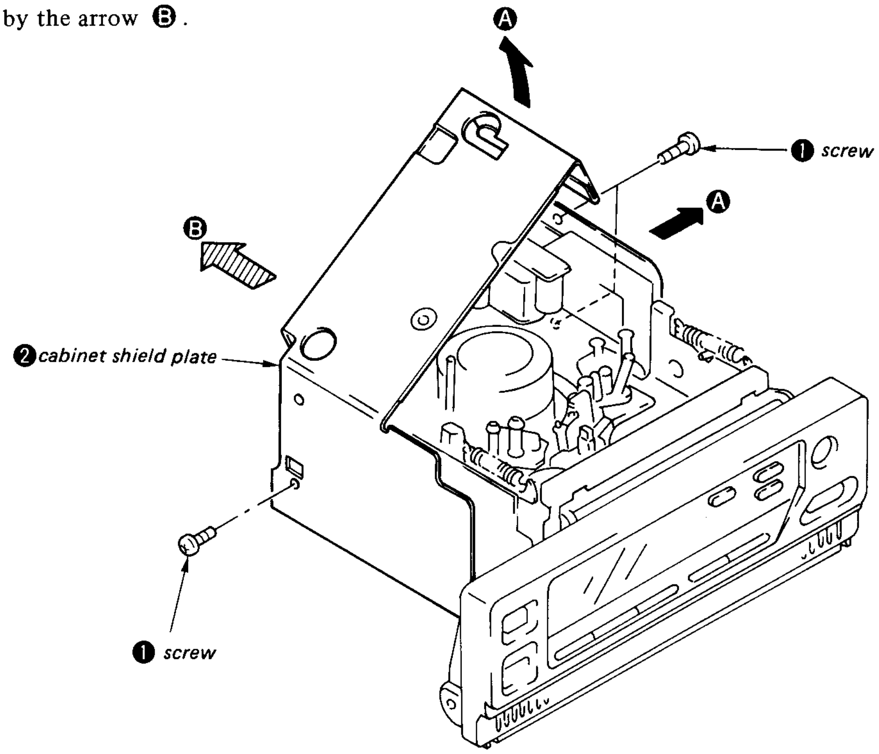
2-4. REMOVAL OF THE FRONT PANEL ASSEMBLY

1) Remove the screw ❶.
2) Remove the right panel bracket of front panel assembly ❷ from the click ❸.
3) Disengage the click ❹ and open the front panel assembly ❷ in the direction shown by the arrow Ⓐ.
4) Remove the cassette compartment blind ❺ in the direction shown by the arrow Ⓑ.
5) Remove the six screws ❻ and remove the front panel assembly ❷ in the direction shown by the arrow Ⓒ.
6) Remove the EJECT knob ❼ and the RECORD knob ❽.


❺ cassette compartment blind
❹ click
❸ click
❶ screw
Ⓑ
Ⓐ
❷ front panel assembly
❻ screws
SK-6 board
❽ REC knob
❼ EJECT knob
Ⓒ
❷ front panel assembly

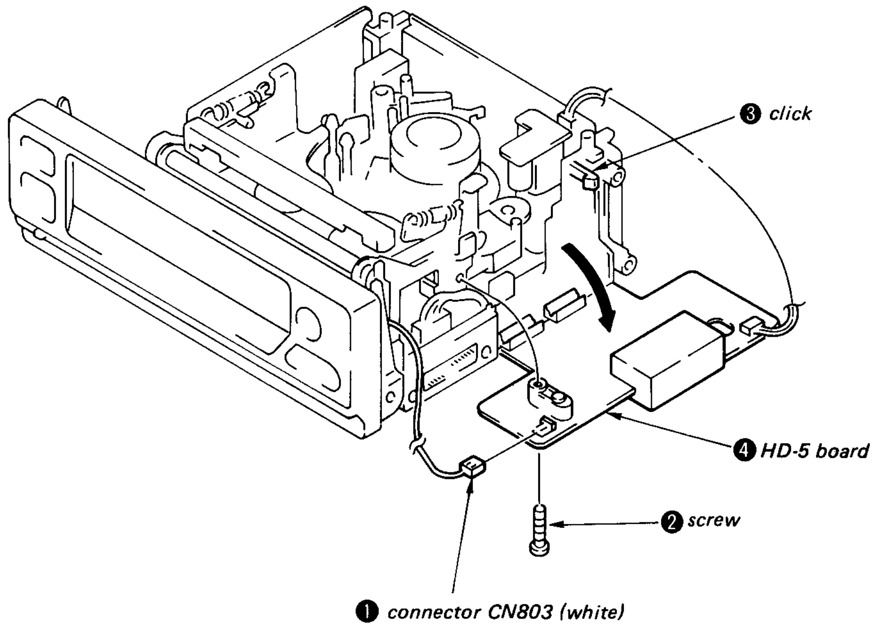
2-5. REMOVAL OF THE CABINET SHIELD PLATE

1) Remove the three screws ❶.
2) Open the cabinet shield plate ❷ in the direction shown by the arrow Ⓐ.
3) Remove the cabinet shield plate ❷ in the direction shown by the arrow Ⓑ.


Ⓐ
❶ screw
Ⓐ
Ⓑ
❷cabinet shield plate
❶ screw

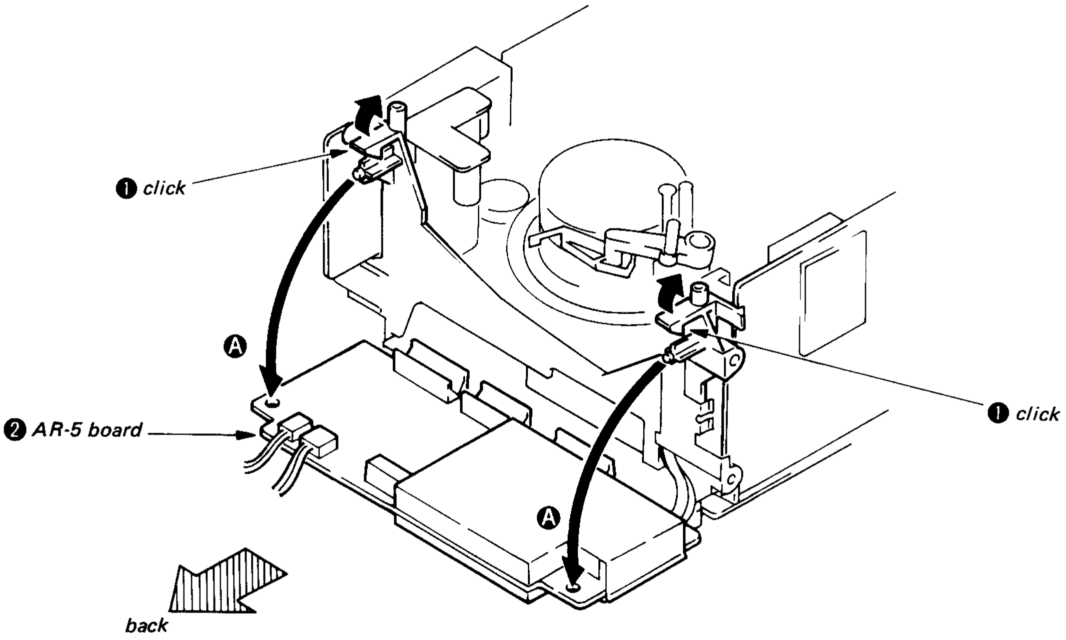
2-6. OPENING OF THE HD-5 BOARD

1) Disconnect the connector CN803 ❶.
2) Remove the screw ❷.
3) Disengage the click ❸ and open the HD-5 board ❹ in the direction shwon by the arrow.


❸ click
❹ HD-5 board
❷ screw
❶ connector CN803 (white)

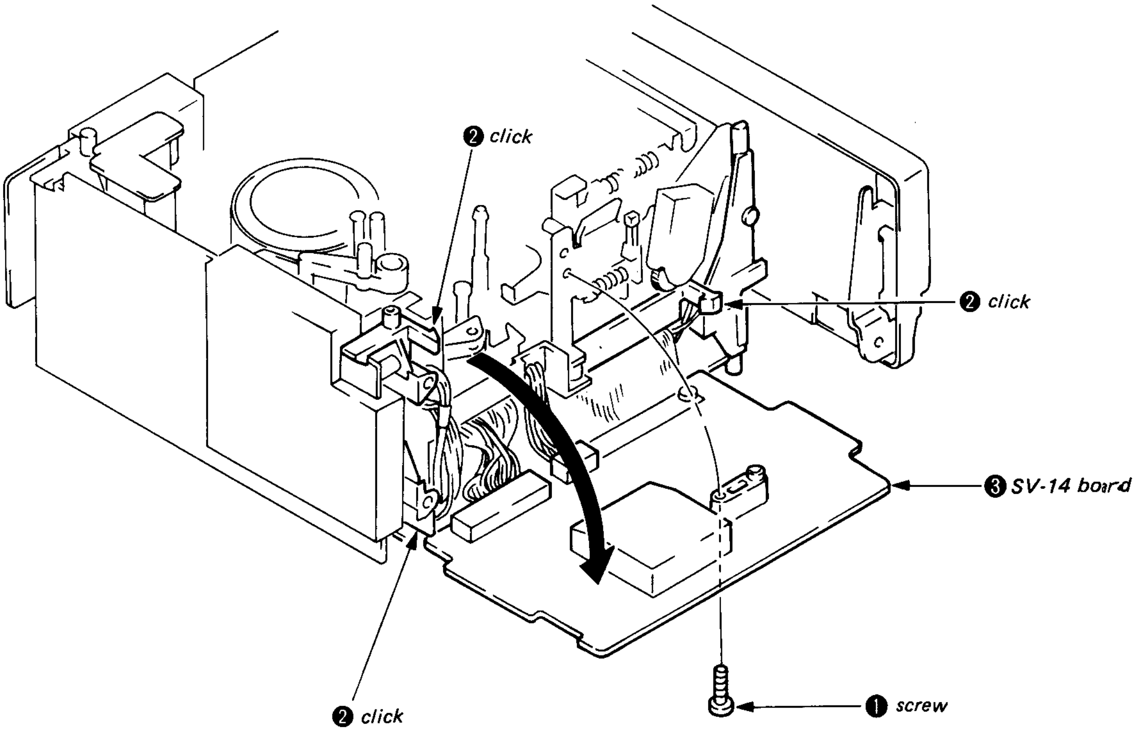
2-7. OPENING OF THE AR-5 BOARD

1) Disengage the two clicks ❶.
2) Open the AR-5 board ❷ in the direction shown by the arrow Ⓐ.


❶ click
Ⓐ
❷ AR-5 board
❶ click
Ⓐ
back

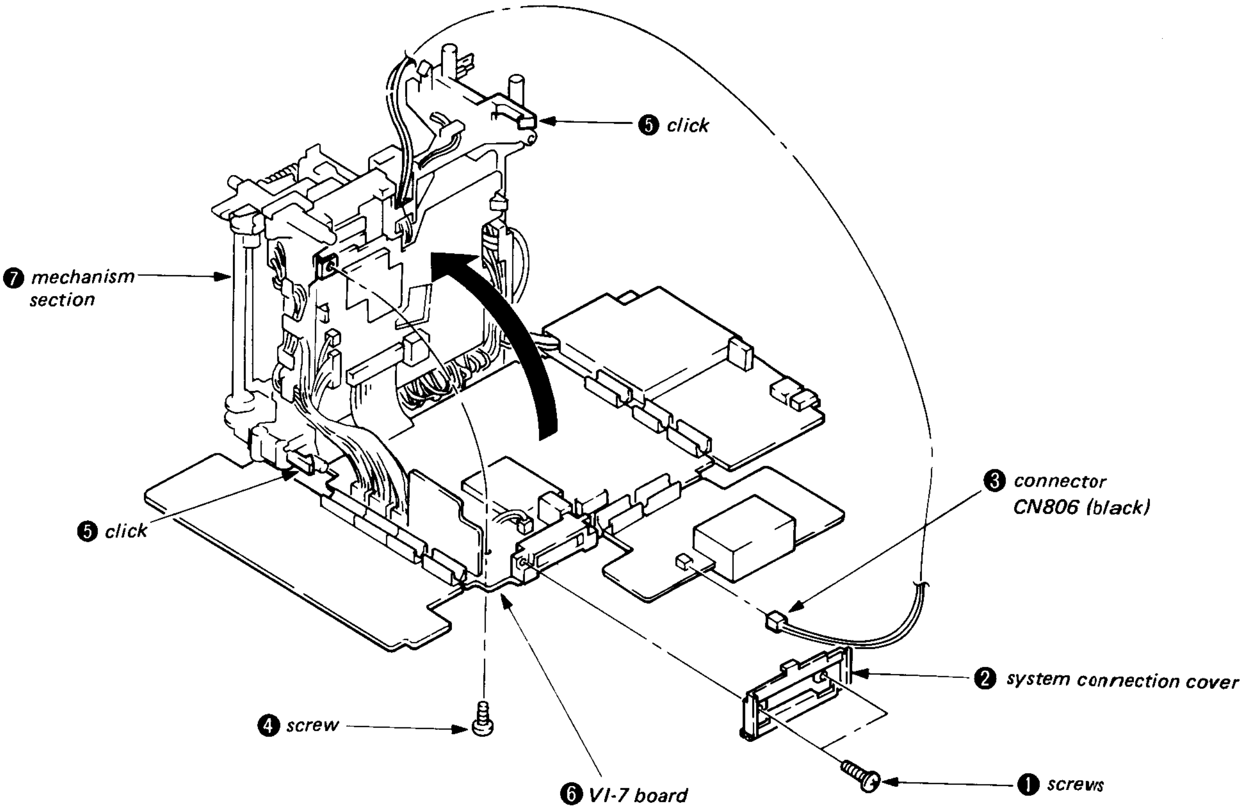
2-8. OPENING OF THE SV-14 BOARD

1) Remove the screw ❶.
2) Disengage the three clicks ❷.
3) Open the SV-14 board in the direction shown by the arrow.


❷ click
❷ click
❸ SV-14 board
❷ click
❶ screw

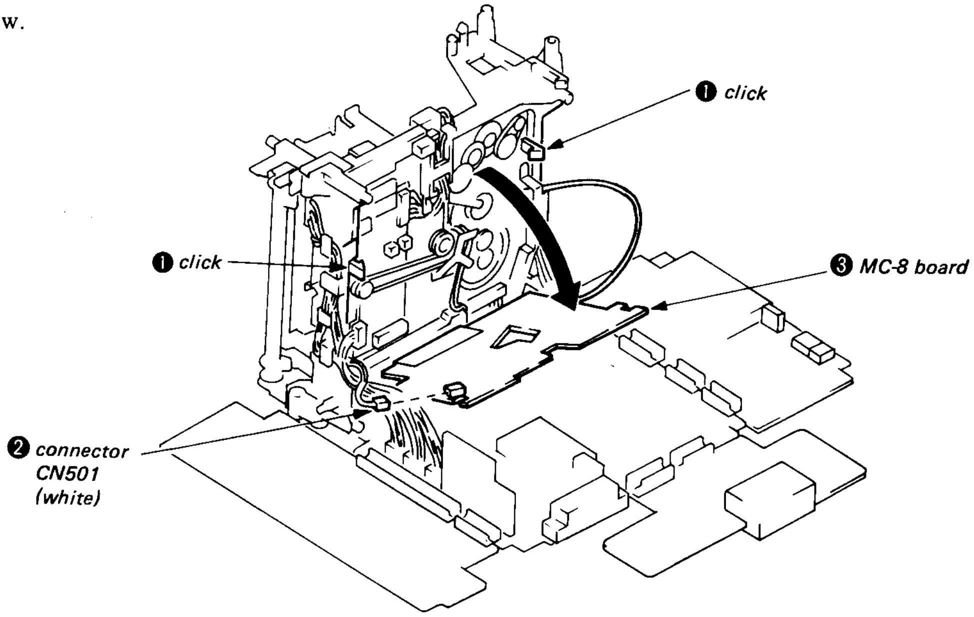
2-9. OPENING OF VI-7 BOARD

1) Remove the two screws ❶ and remove the system connection cover ❷ .
2) Disconnect the connector CN806 ❸ .
3) Remove the screw ❹ .
4) Disengage the two clicks ❺ from the VI-7 board ❻ .
5) Open the mechanism section ❼ in the direction shown by the arrow.


❺ click
❼ mechanism section
❺ click
❸ connector CN806 (black)
❷ system connection cover
❹ screw
❻ VI-7 board
❶ screws

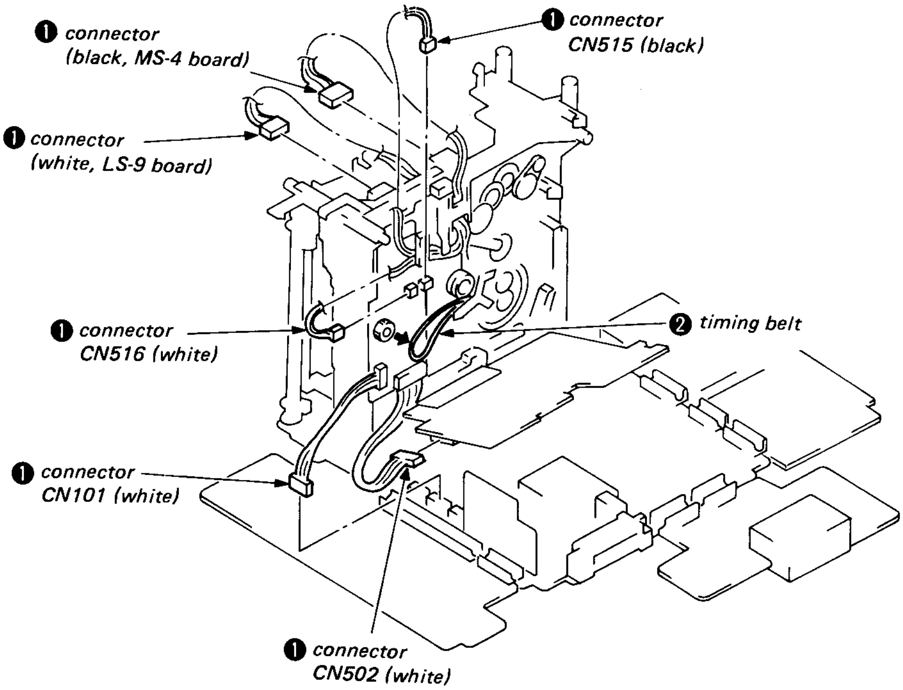
2-10. REMOVAL OF THE MC-8 BOARD

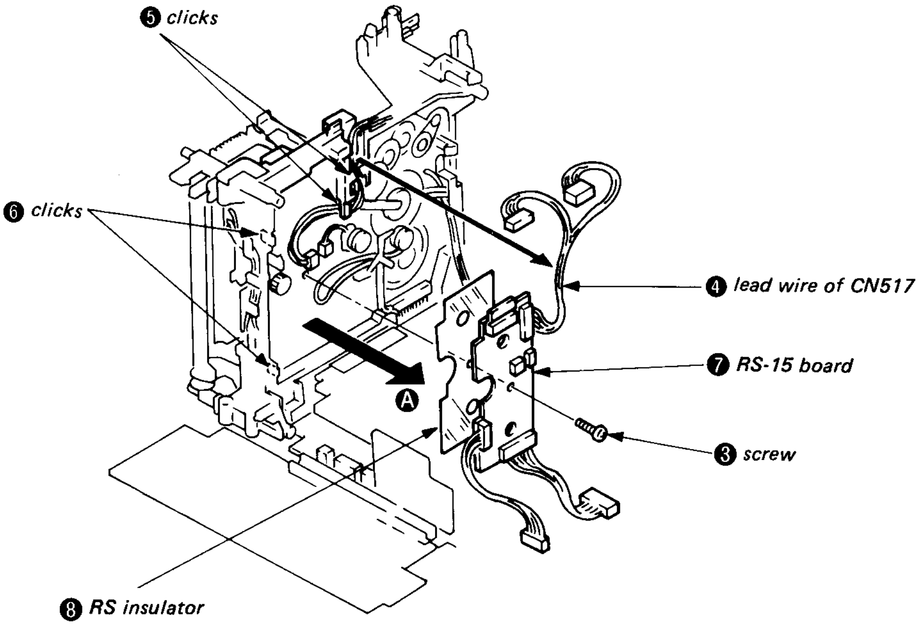
1) Disengage the two clicks ❶ .
2) Disconnect the connector CN501 ❷ .
3) Remove the MC-8 board ❸ in the direction shown by the arrow.


❶ click
❶ click
❸ MC-8 board
❷ connector CN501 (white)

2-11. REMOVAL OF THE RS-15 BOARD

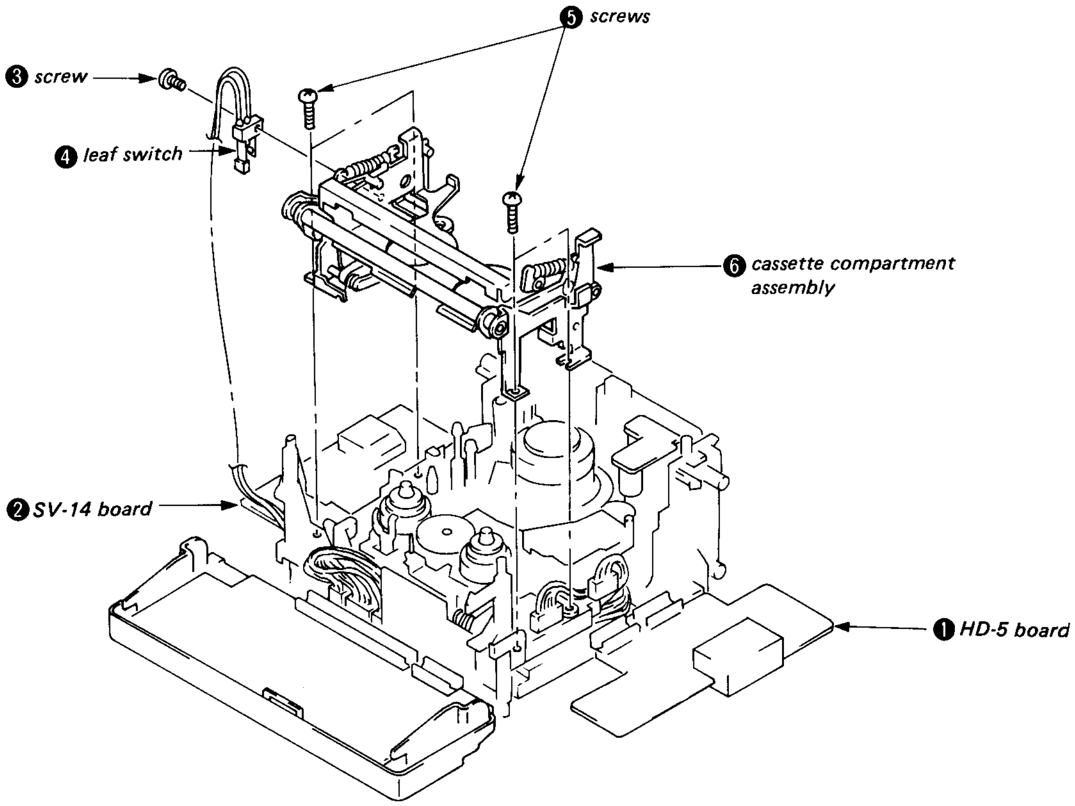
1) Disconnect the six connectors ❶ .
2) Remove the timing belt ❷ from the pulley.
3) Remove the screw ❸ .
4) Release the lead wire of CN517 ❹ from the two clicks ❺ .
5) Disengage the two clicks ❻ and remove the RS-15 board ❼ and the RS insulator ❽ in the direction shown by the arrow Ⓐ .


❶ connector (black, MS-4 board)
❶ connector CN515 (black)
❶ connector (white, LS-9 board)
❶ connector CN516 (white)
❷ timing belt
❶ connector CN101 (white)
❶ connector CN502 (white)


❺ clicks
❻ clicks
❹ lead wire of CN517
❼ RS-15 board
Ⓐ
❸ screw
❽ RS insulator

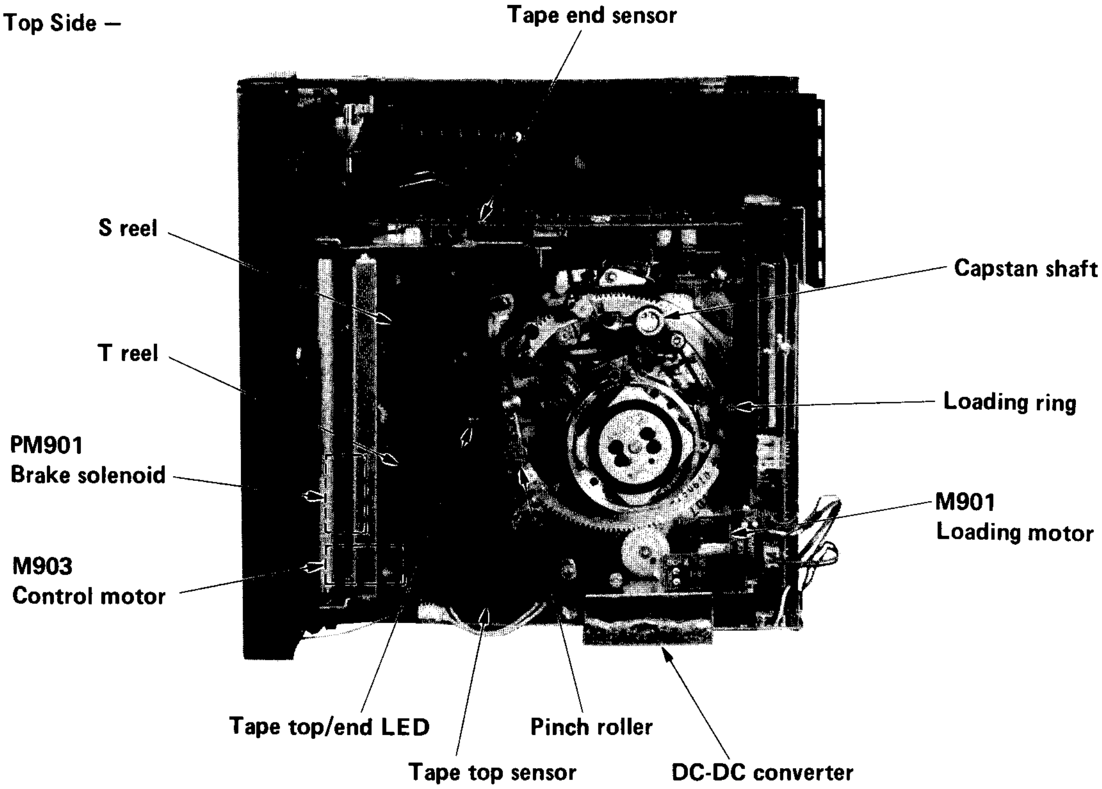
2-12. REMOVAL OF THE CASSETTE COMPARTMENT ASSEMBLY

1) Perform the opening of the HD-5 board ❶ and the SV-14 board ❷ in advance.
2) Remove the screw ❸ and the leaf switch ❹.
3) Remove the four screws ❺ and remove the cassette compartment assembly ❻.

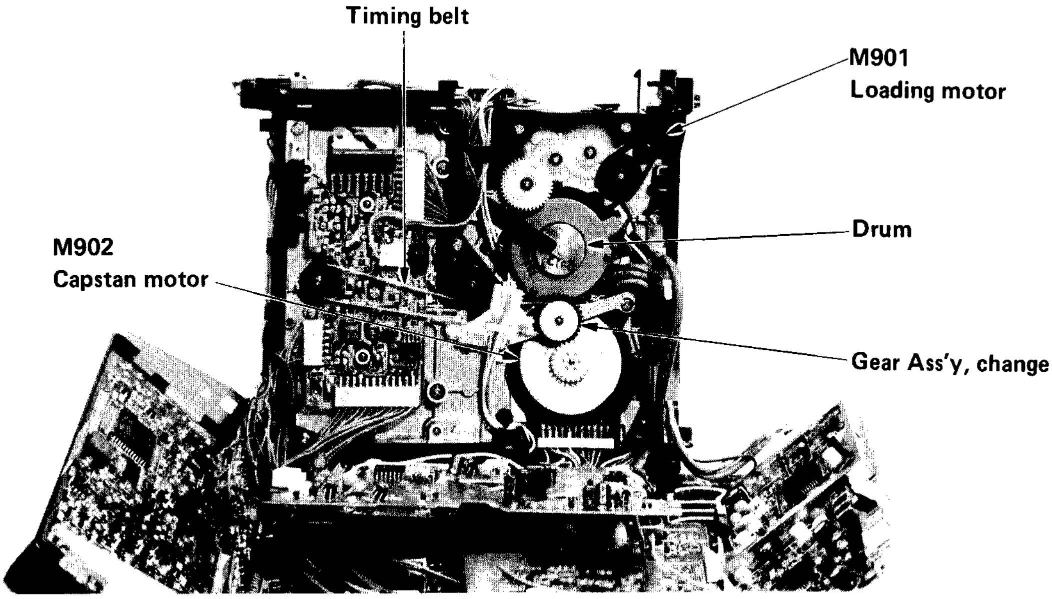

❺ screws
❸ screw
❹ leaf switch
❻ cassette compartment assembly
❷ SV-14 board
❶ HD-5 board

2-13. INTERNAL VIEW

– Top Side –

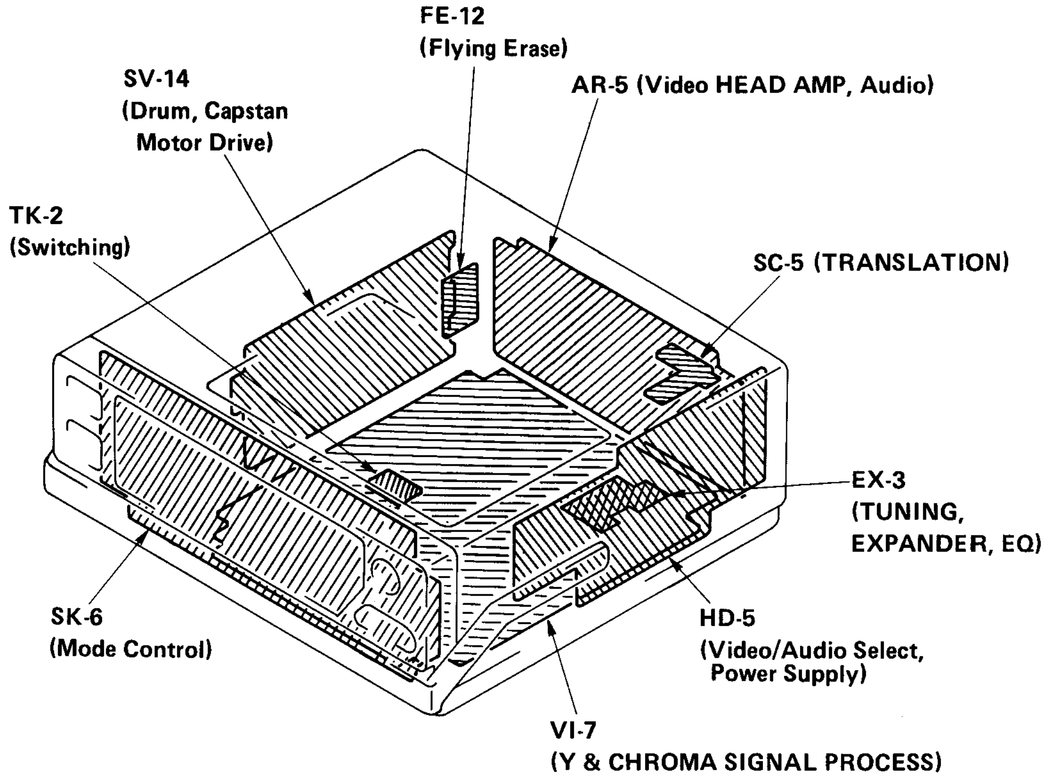

Tape end sensor
S reel
T reel
PM901
Brake solenoid
M903
Control motor
Capstan shaft
Loading ring
M901
Loading motor
Tape top/end LED
Pinch roller
Tape top sensor
DC-DC converter

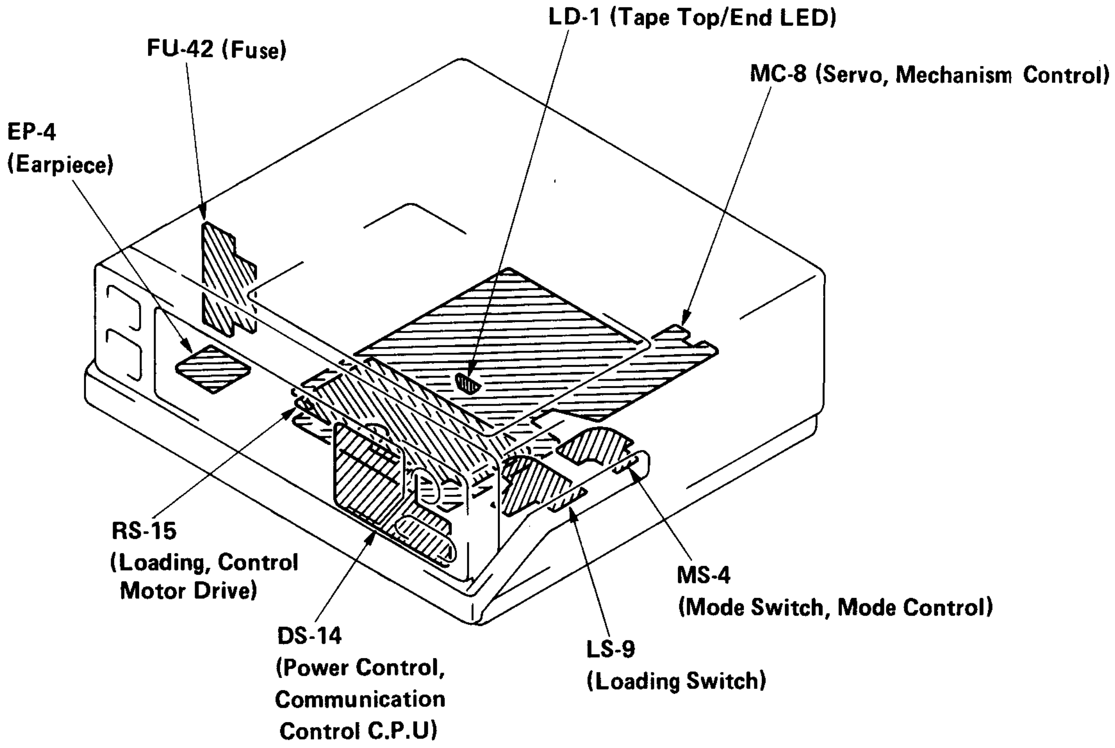
– bottom side–


Timing belt
M901
Loading motor
M902
Capstan motor
Drum
Gear Ass'y, change

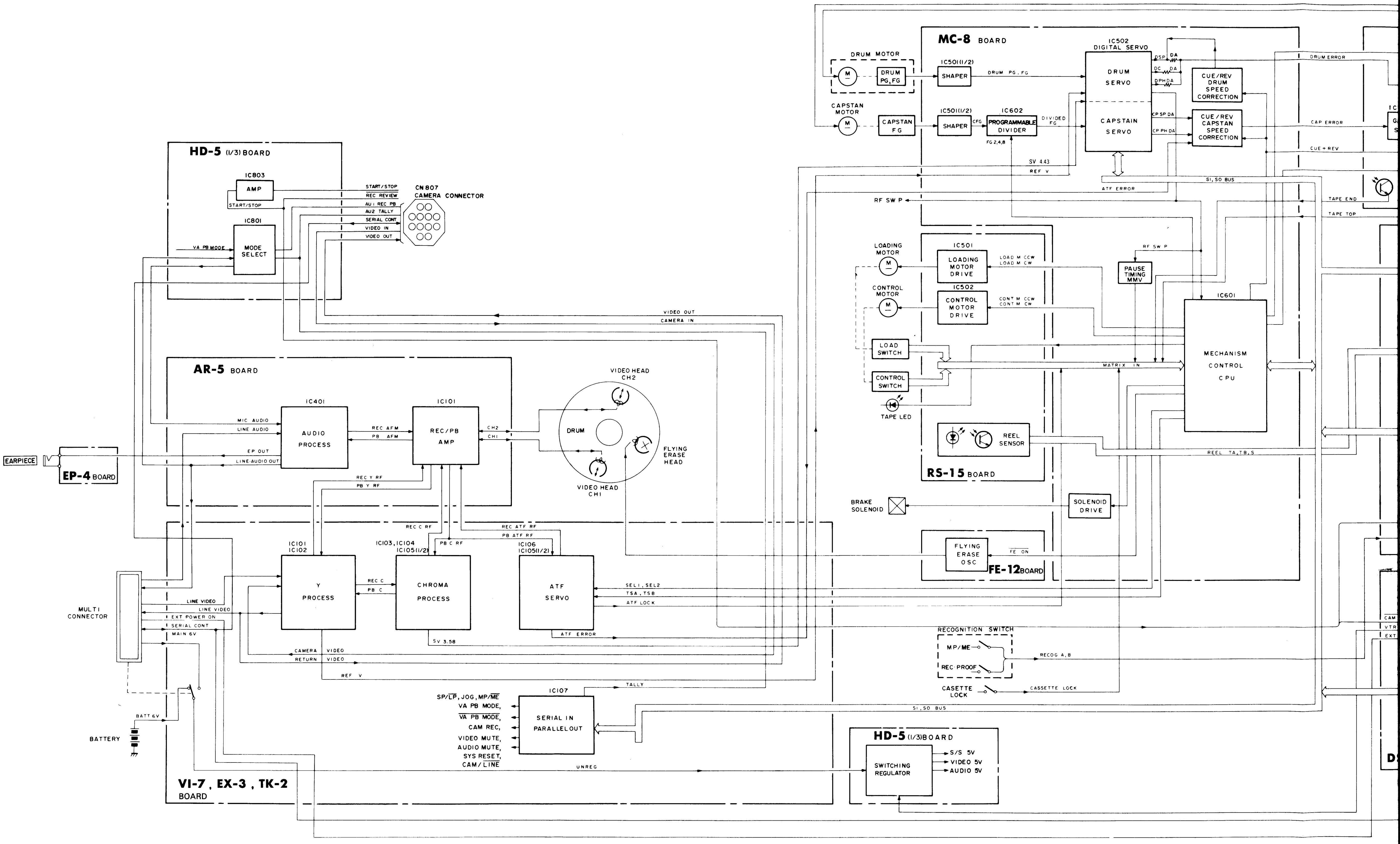
SECTION 3
DIAGRAMS

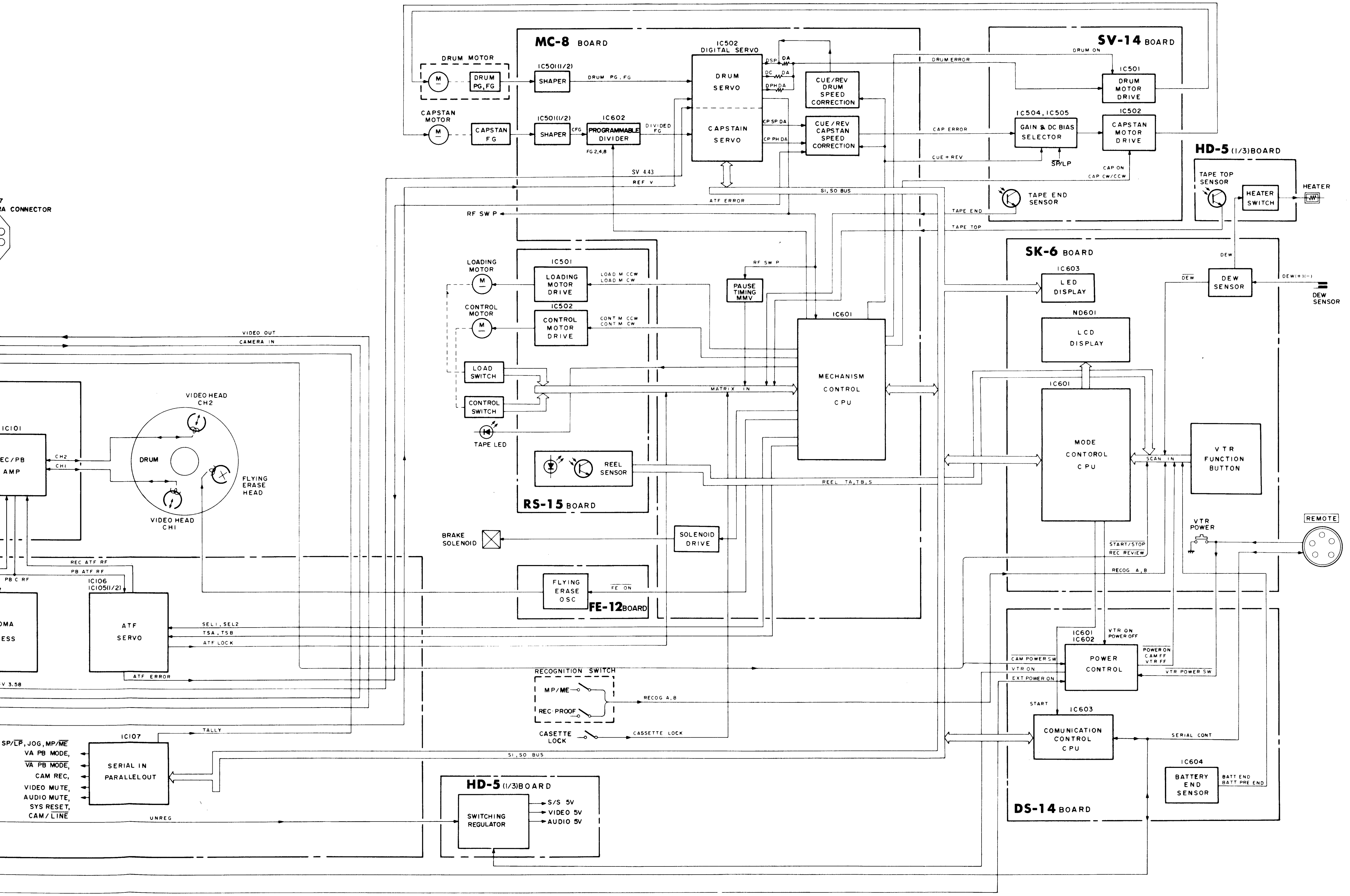
3-1. CIRCUIT BOARDS LOCATION


FE-12
(Flying Erase)
SV-14
(Drum, Capstan
Motor Drive)
AR-5 (Video HEAD AMP, Audio)
TK-2
(Switching)
SC-5 (TRANSLATION)
EX-3
(TUNING,
EXPANDER, EQ)
SK-6
(Mode Control)
HD-5
(Video/Audio Select,
Power Supply)
VI-7
(Y & CHROMA SIGNAL PROCESS)

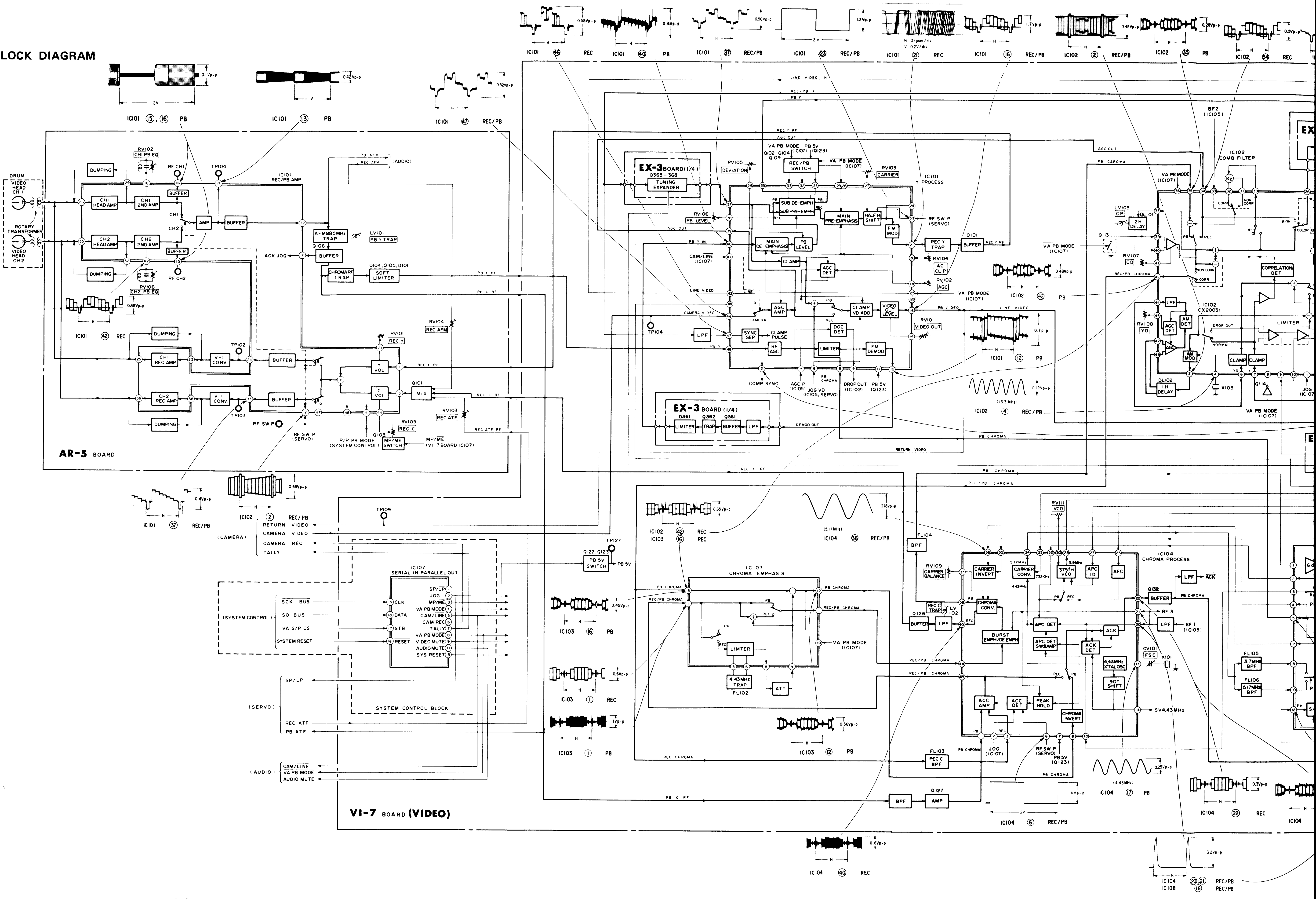

LD-1 (Tape Top/End LED)
FU-42 (Fuse)
MC-8 (Servo, Mechanism Control)
EP-4
(Earpiece)
RS-15
(Loading, Control
Motor Drive)
MS-4
(Mode Switch, Mode Control)
DS-14
(Power Control,
Communication
Control C.P.U)
LS-9
(Loading Switch)

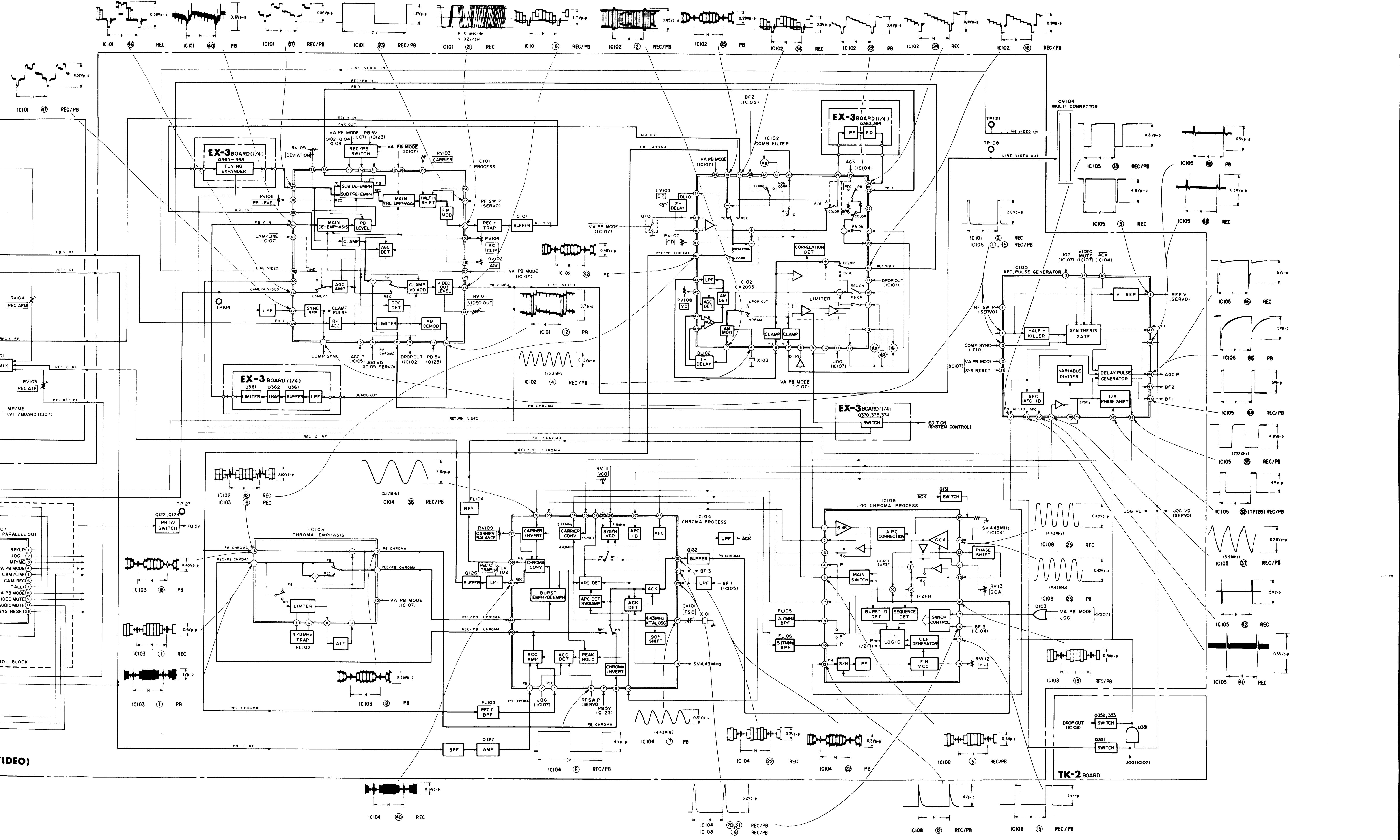
3-2. OVERALL BLOCK DIAGRAM


HD-5 (1/3) BOARD
IC803
AMP
START/STOP
IC801
MODE SELECT
VA PB MODE
START/STOP
REC REVIEW
AU1 REC PB
AU2 TALLY
SERIAL CONT
VIDEO IN
VIDEO OUT
CN 807
CAMERA CONNECTOR
VIDEO OUT
CAMERA IN
AR-5 BOARD
IC401
AUDIO PROCESS
MIC AUDIO
LINE AUDIO
EP OUT
LINE AUDIO OUT
IC101
REC/PB AMP
REC AFM
PB AFM
CH2
CH1
VIDEO HEAD CH2
DRUM
VIDEO HEAD CH1
FLYING ERASE HEAD
EARPIECE
EP-4 BOARD
REC Y RF
PB Y RF
REC C RF
PB C RF
REC ATF RF
PB ATF RF
IC101
IC102
Y PROCESS
IC103, IC104
IC105(1/2)
CHROMA PROCESS
REC C
PB C
IC106
IC105(1/2)
ATF SERVO
SEL1, SEL2
TSA, TSB
ATF LOCK
ATF ERROR
SV 3.58
MULTI CONNECTOR
LINE VIDEO
LINE VIDEO
EXT POWER ON
SERIAL CONT
MAIN 6V
CAMERA VIDEO
RETURN VIDEO
REF V
BATT 6V
BATTERY
IC107
SERIAL IN PARALLELOUT
TALLY
SP/$\overline{\text{LP}}$, JOG, MP/$\overline{\text{ME}}$
VA PB MODE,
$\overline{\text{VA PB MODE}}$,
CAM REC,
VIDEO MUTE,
AUDIO MUTE,
SYS RESET,
CAM/$\overline{\text{LINE}}$
UNREG
VI-7, EX-3, TK-2 BOARD
MC-8 BOARD
DRUM MOTOR
M
DRUM PG, FG
IC501(1/2)
SHAPER
DRUM PG, FG
CAPSTAN MOTOR
M
CAPSTAN FG
IC501(1/2)
SHAPER
CFG
IC602
PROGRAMMABLE DIVIDER
FG 2,4,8
DIVIDED FG
IC502
DIGITAL SERVO
DRUM SERVO
CAPSTAIN SERVO
DSP
DC
DPH DA
DA
DA
CP SP DA
CP PH DA
CUE/REV DRUM SPEED CORRECTION
CUE/REV CAPSTAN SPEED CORRECTION
DRUM ERROR
CAP ERROR
CUE + REV
SV 4.43
REF V
SI, SO BUS
ATF ERROR
RF SW P
TAPE END
TAPE TOP
IC
LOADING MOTOR
M
IC501
LOADING MOTOR DRIVE
LOAD M CCW
LOAD M CW
CONTROL MOTOR
M
IC502
CONTROL MOTOR DRIVE
CONT M CCW
CONT M CW
RF SW P
PAUSE TIMING MMV
IC601
MECHANISM CONTROL CPU
LOAD SWITCH
CONTROL SWITCH
MATRIX IN
TAPE LED
REEL SENSOR
REEL TA, TB, S
RS-15 BOARD
BRAKE SOLENOID
SOLENOID DRIVE
FLYING ERASE OSC
$\overline{\text{FE ON}}$
FE-12 BOARD
RECOGNITION SWITCH
MP/ME
REC PROOF
RECOG A, B
CASETTE LOCK
CASSETTE LOCK
SI, SO BUS
HD-5 (1/3) BOARD
SWITCHING REGULATOR
S/S 5V
VIDEO 5V
AUDIO 5V
CAM
VTR
EXT
D

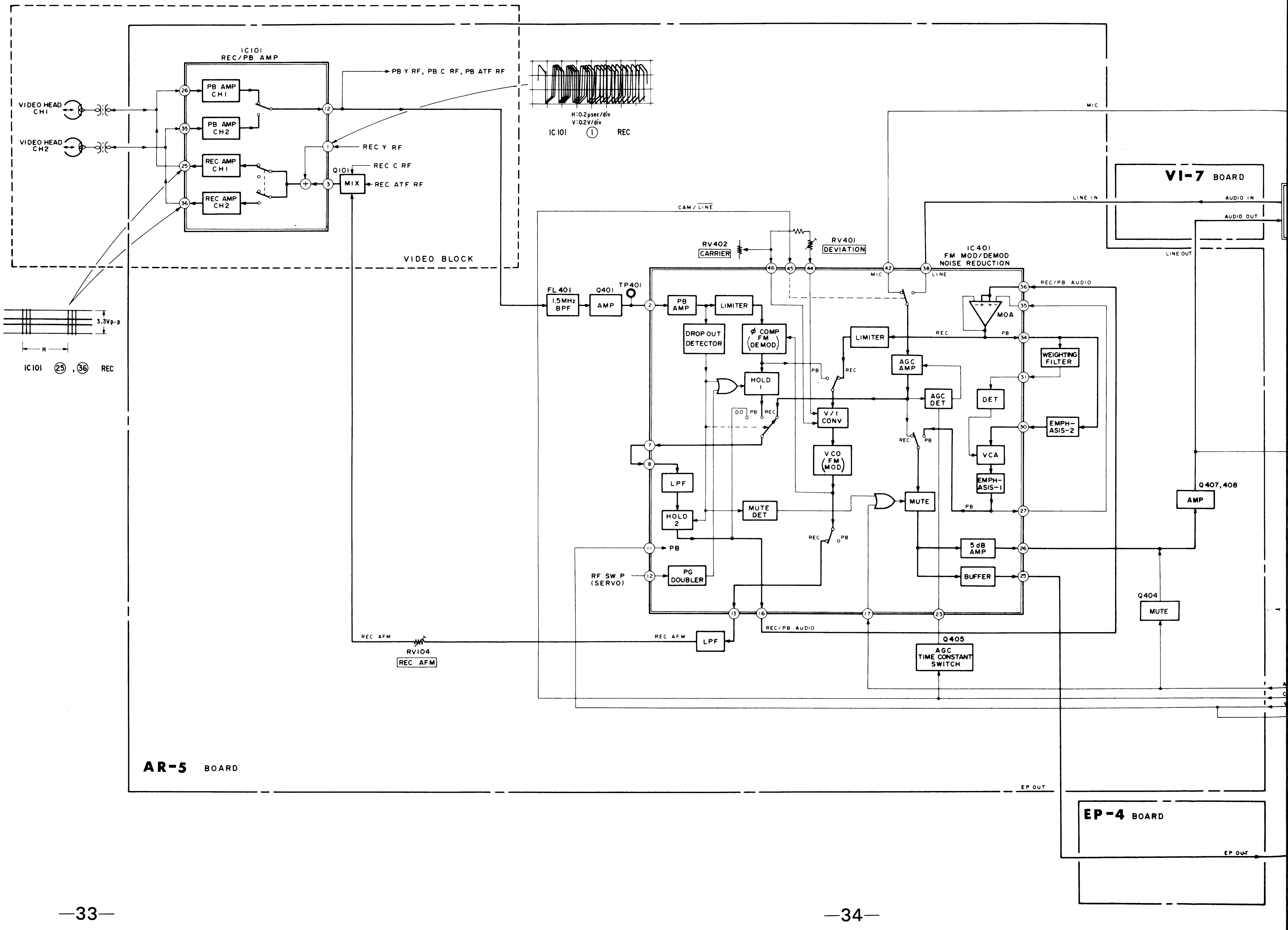

7
A CONNECTOR
MC-8 BOARD
DRUM MOTOR
M
DRUM PG, FG
IC501(1/2)
SHAPER
DRUM PG, FG
CAPSTAN MOTOR
M
CAPSTAN FG
IC501(1/2)
SHAPER
CFG
IC602
PROGRAMMABLE DIVIDER
FG 2,4,8
DIVIDED FG
IC502
DIGITAL SERVO
DRUM SERVO
CAPSTAIN SERVO
DSP
DA
DC
DA
DPH DA
CP SP DA
CP PH DA
CUE/REV DRUM SPEED CORRECTION
CUE/REV CAPSTAN SPEED CORRECTION
SV 4.43
REF V
SI, SO BUS
ATF ERROR
RF SW P
SV-14 BOARD
DRUM ON
DRUM ERROR
IC501
DRUM MOTOR DRIVE
IC504, IC505
GAIN & DC BIAS SELECTOR
CAP ERROR
CUE + REV
$\overline{SP}$/LP
IC502
CAPSTAN MOTOR DRIVE
CAP ON
CAP CW/CCW
TAPE END SENSOR
TAPE END
TAPE TOP
HD-5 (1/3)BOARD
TAPE TOP SENSOR
HEATER SWITCH
HEATER
LOADING MOTOR
M
IC501
LOADING MOTOR DRIVE
LOAD M CCW
LOAD M CW
CONTROL MOTOR
M
IC502
CONTROL MOTOR DRIVE
CONT M CCW
CONT M CW
LOAD SWITCH
CONTROL SWITCH
TAPE LED
REEL SENSOR
RS-15 BOARD
RF SW P
PAUSE TIMING MMV
IC601
MECHANISM CONTROL CPU
MATRIX IN
REEL TA, TB, S
BRAKE SOLENOID
SOLENOID DRIVE
FLYING ERASE OSC
$\overline{FE}$ ON
FE-12BOARD
SK-6 BOARD
IC603
LED DISPLAY
ND601
LCD DISPLAY
IC601
MODE CONTOROL CPU
DEW
$\overline{DEW}$
DEW SENSOR
DEW(+)(−)
DEW SENSOR
SCAN IN
VTR FUNCTION BUTTON
VIDEO OUT
CAMERA IN
VIDEO HEAD CH2
IC101
EC/PB AMP
CH2
CH1
DRUM
FLYING ERASE HEAD
VIDEO HEAD CH1
REC ATF RF
PB ATF RF
PB C RF
IC106
IC105(1/2)
OMA
ESS
ATF SERVO
SEL1, SEL2
TSA, TSB
ATF LOCK
ATF ERROR
V 3.58
RECOGNITION SWITCH
MP/ME
REC PROOF
RECOG A, B
CASETTE LOCK
CASSETTE LOCK
TALLY
IC107
SP/$\overline{LP}$, JOG, MP/$\overline{ME}$
VA PB MODE,
$\overline{VA\ PB\ MODE}$,
CAM REC,
VIDEO MUTE,
AUDIO MUTE,
SYS RESET,
CAM/$\overline{LINE}$
SERIAL IN PARALLELOUT
SI, SO BUS
UNREG
HD-5 (1/3)BOARD
SWITCHING REGULATOR
S/S 5V
VIDEO 5V
AUDIO 5V
REMOTE
VTR POWER
START/STOP
REC REVIEW
RECOG A, B
IC601
IC602
VTR ON
POWER OFF
POWER CONTROL
$\overline{CAM\ POWER\ SW}$
VTR ON
EXT POWER ON
$\overline{POWER\ ON}$
CAM FF
VTR FF
$\overline{VTR\ POWER\ SW}$
START
IC603
COMUNICATION CONTROL CPU
SERIAL CONT
IC604
BATTERY END SENSOR
BATT END
BATT PRE END
DS-14 BOARD

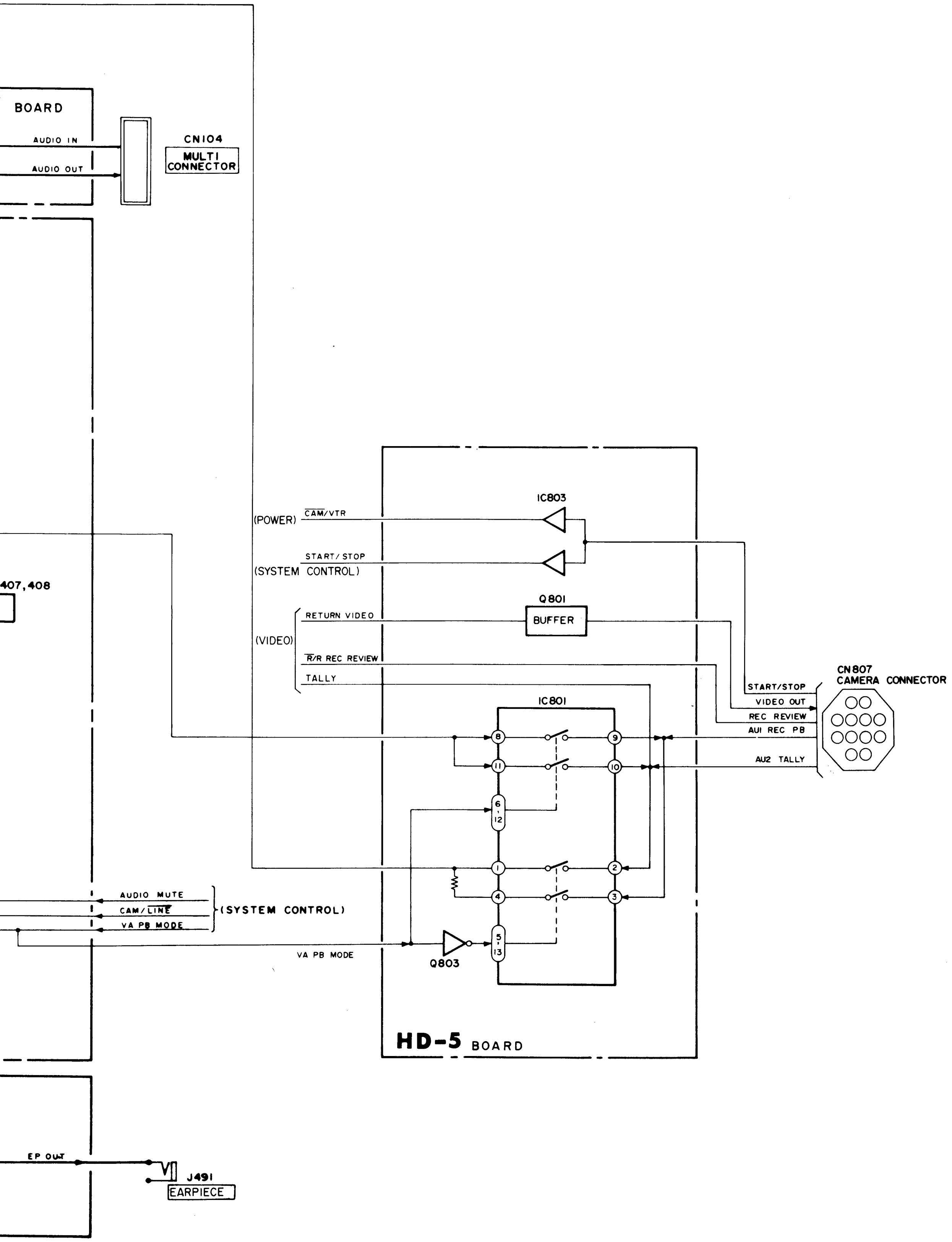
3-3. VIDEO SYSTEM BLOCK DIAGRAM


IC101 ⑮, ⑯ PB
IC101 ⑬ PB
IC101 ㊼ REC/PB
AR-5 BOARD
DRUM VIDEO HEAD CH1
ROTARY TRANSFORMER
VIDEO HEAD CH2
CH1 HEAD AMP
CH1 2ND AMP
CH2 HEAD AMP
CH2 2ND AMP
DUMPING
BUFFER
AMP
RV102 CH1 PB EQ
RV106 CH2 PB EQ
RF CH1
RF CH2
TP104
IC101 REC/PB AMP
AFM 1.5MHz TRAP
LV101 PB Y TRAP
Q106
CHROMA RF TRAP
Q104, Q105, D101 SOFT LIMITER
ACK JOG
(AUDIO)
PB AFM
REC AFM
IC101 ㊷ REC
CH1 REC AMP
CH2 REC AMP
V-I CONV
TP102
TP103
Y VOL
C VOL
Q101 MIX
RV101 REC Y
RV104 REC AFM
RV103 REC ATF
RV105 REC C
MP/ME SWITCH
Q103
R/P PB MODE (SYSTEM CONTROL)
MP/ME (VI-7 BOARD IC107)
RF SW P
RF SW P (SERVO)
REC Y RF
REC C RF
REC ATF RF
PB Y RF
PB C RF
IC101 ㊲ REC/PB
IC102 ② REC/PB
TP109
RETURN VIDEO
CAMERA VIDEO
CAMERA REC
TALLY
(CAMERA)
IC107 SERIAL IN PARALLEL OUT
SCK BUS
SO BUS
VA S/P CS
SYSTEM RESET
(SYSTEM CONTROL)
CLK
DATA
STB
RESET
SP/LP
JOG
MP/ME
CAM/LINE
CAM REC
VA PB MODE
TALLY
VIDEO MUTE
AUDIO MUTE
SYS RESET
SYSTEM CONTROL BLOCK
(SERVO)
REC ATF
PB ATF
(AUDIO)
CAM/LINE
VA PB MODE
AUDIO MUTE
VI-7 BOARD (VIDEO)
TP127
Q122, Q123 PB 5V SWITCH
PB 5V
IC101 ㊻ REC
IC101 ㊵ PB
IC101 ㊲ REC/PB
IC101 ㉓ REC/PB
IC101 ㉑ REC
IC101 ⑯ REC/PB
IC102 ② REC/PB
IC102 ㉟ PB
IC102 ㉞ REC
LINE VIDEO IN
REC/PB Y
PB Y
REC Y RF
AGC OUT
EX-3 BOARD (1/4)
Q365-368
TUNING EXPANDER
RV105 DEVIATION
VA PB MODE PB 5V
Q102-Q104 (IC107) (Q123)
Q109
REC/PB SWITCH
VA PB MODE (IC107)
RV103 CARRIER
IC101 Y PROCESS
SUB DE-EMPH
SUB PRE-EMPH
MAIN PRE-EMPHASIS
HALF H SHIFT
FM MOD
RF SW P (SERVO)
RV106 PB LEVEL
MAIN DE-EMPHASIS
PB LEVEL
REC Y TRAP
Q101 BUFFER
RV104 AC CLIP
RV102 AGC
CAM/LINE (IC107)
CLAMP
AGC DET
AGC AMP
LINE VIDEO
CAMERA VIDEO
CLAMP VD ADD
VIDEO OUT LEVEL
RV101 VIDEO OUT
PB VIDEO
VA PB MODE (IC107)
TP104
LPF
SYNC SEP
CLAMP PULSE
RF AGC
DOC DET
LIMITER
FM DEMOD
COMP SYNC
AGC P (IC105)
JOG VD (IC105, SERVO)
DROPOUT (IC102)
PB 5V (Q123)
EX-3 BOARD (1/4)
D361 Q362 Q361
LIMITER
TRAP
BUFFER
LPF
DEMOD OUT
RETURN VIDEO
PB CHROMA
IC101 ⑫ PB
IC102 ④ REC/PB
IC102 ㊷ PB
BF2 (IC105)
IC102 COMB FILTER
AGC OUT
PB CHROMA
VA PB MODE (IC107)
LV103 CP
DL101 2H DELAY
Q113
RV107 CD
REC/PB CHROMA
NON CORR
CORR
B/W
COLOR
CORRELATION DET
LPF
AGC DET
AM DET
AM MOD
RV108 YD
IC102 CX20031
DROP OUT
NORMAL
LIMITER
DL102 1H DELAY
X103
CLAMP
Q114
JOG (IC107)
VA PB MODE (IC107)
REC C RF
PB CHROMA
REC/PB CHROMA
IC102 ㊷ REC
IC103 ⑯ REC
IC104 ㊱ REC/PB
IC103 CHROMA EMPHASIS
PB CHROMA
REC/PB CHROMA
LIMTER
4.43MHz TRAP
FL102
ATT
VA PB MODE (IC107)
IC103 ⑯ PB
IC103 ① REC
IC103 ① PB
IC103 ⑫ PB
REC CHROMA
FL104 BPF
RV109 CARRIER BALANCE
RV111 VCO
CARRIER INVERT
CARRIER CONV
375fH VCO
APC ID
AFC
IC104 CHROMA PROCESS
Q126 BUFFER
REC C TRAP
LV102
LPF
CHROMA CONV
BURST EMPH/DE EMPH
APC DET
APC DET SW&AMP
ACK DET
ACK
Q132 BUFFER
LPF
BF3
BF1 (IC105)
CV101 FSC
X101
4.43MHz X'TAL OSC
90° SHIFT
SV 4.43MHz
ACC AMP
ACC DET
PEAK HOLD
CHROMA INVERT
JOG (IC107)
RF SW P (SERVO)
PB 5V (Q123)
FL103 PEC C BPF
PB CHROMA
IC104 ⑰ PB
IC104 ㉒ REC
FL105 3.7MHz BPF
FL106 5.17MHz BPF
PB C RF
BPF
Q127 AMP
IC104 ⑥ REC/PB
IC104 ㊵ REC
IC104 IC108 ⑳㉑ ⑯ REC/PB

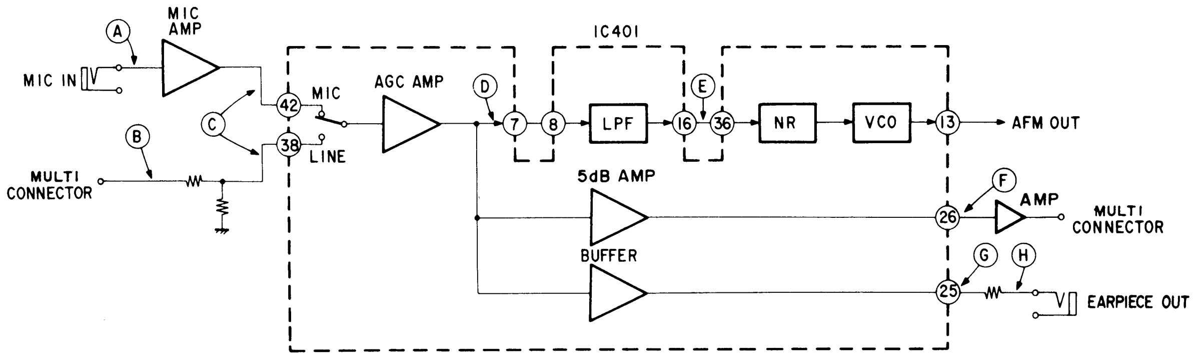

EX-3 BOARD (1/4)
Q365-368
TUNING EXPANDER
EX-3 BOARD (1/4)
D361 Q362 Q361
LIMITER
TRAP
BUFFER
LPF
DEMOD OUT
RETURN VIDEO
IC101
Y PROCESS
RV105 DEVIATION
RV106 PB LEVEL
RV103 CARRIER
VA PB MODE (IC107)
PB 5V (Q123)
Q102-Q104
Q109
REC/PB SWITCH
SUB DE-EMPH
SUB PRE-EMPH
MAIN PRE-EMPHASIS
HALF H SHIFT
FM MOD
MAIN DE-EMPHASIS
PB LEVEL
CLAMP
AGC DET
AGC AMP
CLAMP VD ADD
VIDEO OUT LEVEL
DOC DET
SYNC SEP
CLAMP PULSE
RF AGC
LIMITER
FM DEMOD
LPF
TP104
REC Y TRAP
Q101 BUFFER
RF SW P (SERVO)
RV104 AC CLIP
RV102 AGC
RV101 VIDEO OUT
COMP SYNC
AGC P (IC105)
JOG VD (IC105, SERVO)
DROPOUT (IC102)
PB 5V (Q123)
LINE VIDEO IN
REC/PB Y
PB Y
REC Y RF
AGC OUT
PB CAROMA
PB Y IN
CAM/LINE (IC107)
LINE VIDEO
CAMERA VIDEO
PB VIDEO
PB Y RF
PB C RF
REC Y RF
RV104 REC AFM
MIX
REC C RF
RV103 REC ATF
REC ATF RF
MP/ME (VI-7 BOARD IC107)
IC102
COMB FILTER
CX20031
BF2 (IC105)
LV103 CP
DL101 2H DELAY
Q113
RV107 CD
RV108 YD
AGC DET
AM DET
AM MOD
DL102 1H DELAY
CORRELATION DET
LIMITER
CLAMP
X103
Q114
VA PB MODE (IC107)
NON CORR
CORR
COLOR
B/W
DROP OUT
NORMAL
REC ON
PB ON
DROP OUT (IC101)
JOG (IC107)
EX-3 BOARD (1/4)
Q363, 364
LPF
EQ
ACK (IC104)
EX-3 BOARD (1/4)
Q370, 373, 374
SWITCH
EDIT ON (SYSTEM CONTROL)
TP121
TP108
LINE VIDEO OUT
CN104 MULTI CONNECTOR
IC105
AFC, PULSE GENERATOR
JOG (IC107)
VIDEO MUTE (IC107)
ACK (IC104)
V SEP
REF V (SERVO)
HALF H KILLER
SYNTHESIS GATE
VARIABLE DIVIDER
DELAY PULSE GENERATOR
AFC AFC ID
1/8 PHASE SHIFT
375fH
AGC P
BF 2
BF 1
RF SW P (SERVO)
COMP SYNC (IC101)
VA PB MODE
SYS RESET
IC103
CHROMA EMPHASIS
PB CHROMA
REC/PB CHROMA
LIMTER
ATT
4.43MHz TRAP
FL102
VA PB MODE (IC107)
TP127
Q122, Q123
PB 5V SWITCH
PB 5V
PARALLEL OUT
SP/LP
JOG
MP/ME
VA PB MODE
CAM/LINE
CAM REC
TALLY
A PB MODE
VIDEO MUTE
AUDIO MUTE
SYS RESET
ROL BLOCK
(VIDEO)
FL104 BPF
Q126 BUFFER
LPF
REC C TRAP
LV 102
IC104
CHROMA PROCESS
RV109 CARRIER BALANCE
CARRIER INVERT
CARRIER CONV.
RV111 VCO
375fH VCO
APC ID
AFC
CHROMA CONV
BURST EMPH/DE EMPH
APC DET
APC DET SW&AMP
ACK DET
ACK
4.43MHz X'TAL OSC
90° SHIFT
CV101 FSC
X101
ACC AMP
ACC DET
PEAK HOLD
CHROMA INVERT
Q132 BUFFER
LPF
BF 3
BF 1 (IC105)
SV4.43MHz
JOG (IC107)
RF SW P (SERVO)
PB 5V (Q123)
FL103 PECC BPF
Q127 AMP
BPF
REC CHROMA
PB C RF
IC108
JOG CHROMA PROCESS
Q131 SWITCH
6dB
APC CORRECTION
GCA
PHASE SHIFT
MAIN SWITCH
QUASI BURST
1/2 FH
BURST ID DET
SEQUENCE DET
SWICH CONTROL
IIL LOGIC
CLF GENERATOR
S/H
LPF
FH VCO
FL105 3.7MHz BPF
FL106 5.17MHz BPF
SV 4.43MHz (IC104)
RV113 GCA
RV112 FH
D103
VA PB MODE
JOG
BF 3 (IC104)
JOG VD
JOG VD (SERVO)
DROP OUT (IC102)
Q352, 353 SWITCH
Q351 SWITCH
D351
JOG (IC107)
TK-2 BOARD
IC101 (46) REC
IC101 (40) PB
IC101 (37) REC/PB
IC101 (23) REC/PB
IC101 (21) REC
IC101 (16) REC/PB
IC102 (2) REC/PB
IC102 (35) PB
IC102 (34) REC
IC102 (22) PB
IC102 (24) REC
IC102 (18) REC/PB
IC101 (47) REC/PB
IC101 (12) PB
IC102 (4) REC/PB
IC102 (42) PB
IC101 (2) REC
IC105 (1), (15) REC/PB
IC105 (53) REC/PB
IC105 (3) REC
IC105 (46) PB
IC105 (61) REC
IC105 (46) REC
IC105 (46) PB
IC105 (64) REC/PB
IC105 (35) REC/PB
IC105 (32) (TP128) REC/PB
IC105 (37) REC/PB
IC105 (62) REC
IC105 (41) REC
IC102 (42) REC
IC103 (16) REC
IC104 (36) REC/PB
IC103 (16) PB
IC103 (1) REC
IC103 (1) PB
IC103 (12) PB
IC104 (6) REC/PB
IC104 (17) PB
IC104 (22) REC
IC104 (22) PB
IC104 (40) REC
IC104 (20)(21) REC/PB
IC108 (16) REC/PB
IC108 (23) REC
IC108 (23) PB
IC108 (18) REC/PB
IC108 (5) REC/PB
IC108 (12) REC/PB
IC108 (15) REC/PB
H 0.1μsec/div
V 0.2V/div
(5.17MHz)
(13.3 MHz)
(4.43MHz)
(5.9MHz)
(732KHz)
0.52Vp-p
0.58Vp-p
0.6Vp-p
0.5Vp-p
1.2Vp-p
1.7Vp-p
0.45Vp-p
0.28Vp-p
0.3Vp-p
0.4Vp-p
0.9Vp-p
4.8Vp-p
0.3Vp-p
0.34Vp-p
2.6Vp-p
0.48Vp-p
0.7p-p
0.12Vp-p
5Vp-p
4.9Vp-p
4Vp-p
0.48Vp-p
0.28Vp-p
0.42Vp-p
0.38Vp-p
0.65Vp-p
0.18Vp-p
0.45Vp-p
0.6Vp-p
1Vp-p
0.36Vp-p
0.25Vp-p
0.3Vp-p
0.6Vp-p
3.2Vp-p
2V

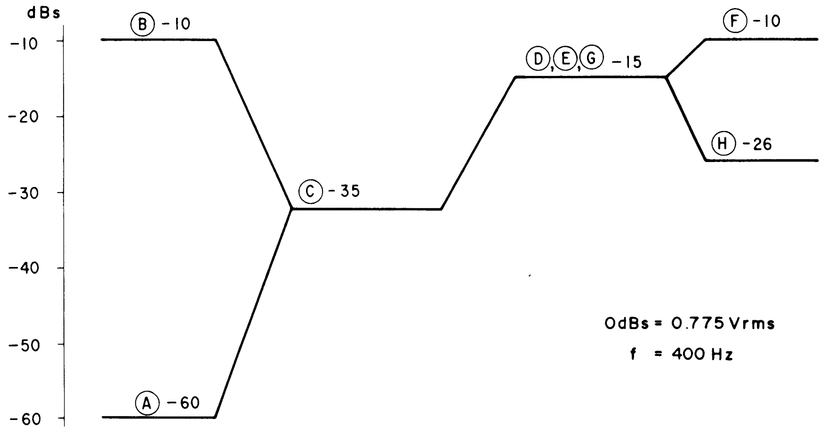
3-4. VIDEO/AUDIO BLOCK DIAGRAM


VIDEO HEAD CH1
VIDEO HEAD CH2
IC101 REC/PB AMP
PB AMP CH1
PB AMP CH2
REC AMP CH1
REC AMP CH2
26
35
25
36
12
1
3
PB Y RF, PB C RF, PB ATF RF
REC Y RF
REC C RF
REC ATF RF
Q101
MIX
VIDEO BLOCK
H:0.2μsec/div
V:0.2V/div
IC101 ① REC
3.3Vp-p
H
IC101 ㉕, ㊱ REC
CAM / LINE
RV402 CARRIER
RV401 DEVIATION
IC401 FM MOD/DEMOD NOISE REDUCTION
FL401 1.5MHz BPF
Q401 AMP
TP401
PB AMP
LIMITER
DROP OUT DETECTOR
ϕ COMP FM (DEMOD)
HOLD 1
DO PB REC
V/I CONV
VCO (FM MOD)
LPF
HOLD 2
MUTE DET
PG DOUBLER
PB
RF SW P (SERVO)
LIMITER
AGC AMP
AGC DET
MUTE
5dB AMP
BUFFER
MOA
WEIGHTING FILTER
DET
VCA
EMPH-ASIS-1
EMPH-ASIS-2
MIC
LINE
REC
PB
REC/PB AUDIO
46
45
44
42
38
36
35
34
31
30
27
26
25
23
17
16
13
11
12
2
7
8
Q405 AGC TIME CONSTANT SWITCH
REC AFM
RV104 REC AFM
LPF
Q407,408 AMP
Q404 MUTE
VI-7 BOARD
LINE IN
AUDIO IN
AUDIO OUT
LINE OUT
AR-5 BOARD
EP OUT
EP-4 BOARD

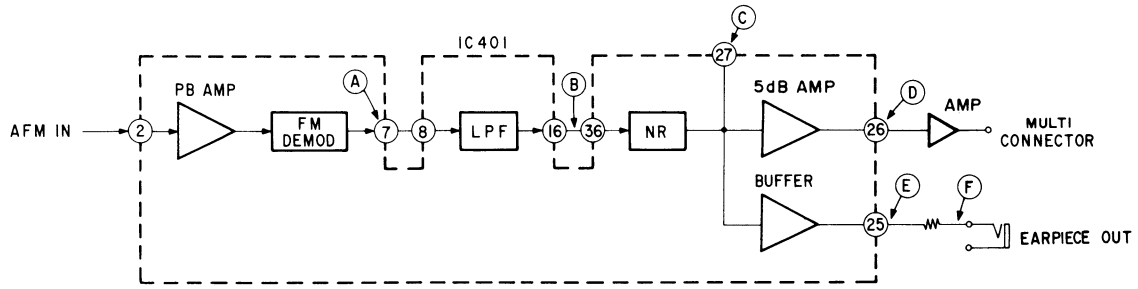

BOARD
AUDIO IN
AUDIO OUT
CN104
MULTI CONNECTOR
407,408
IC803
(POWER) CAM/VTR
START/STOP
(SYSTEM CONTROL)
Q801
BUFFER
(VIDEO)
RETURN VIDEO
R/R REC REVIEW
TALLY
IC801
START/STOP
VIDEO OUT
REC REVIEW
AU1 REC PB
AU2 TALLY
CN807
CAMERA CONNECTOR
AUDIO MUTE
CAM/LINE
VA PB MODE
(SYSTEM CONTROL)
VA PB MODE
Q803
HD-5 BOARD
EP OUT
J491
EARPIECE

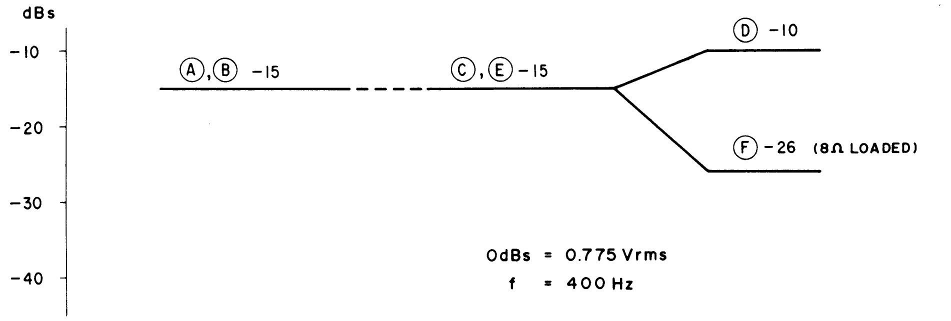
3-5. AUDIO LEVEL DIAGRAM


MIC IN
Ⓐ
MIC AMP
Ⓑ
MULTI CONNECTOR
Ⓒ
42
38
MIC
LINE
AGC AMP
Ⓓ
7
8
IC401
LPF
Ⓔ
16
36
NR
VCO
13
AFM OUT
5dB AMP
BUFFER
26
Ⓕ
AMP
MULTI CONNECTOR
25
Ⓖ
Ⓗ
EARPIECE OUT



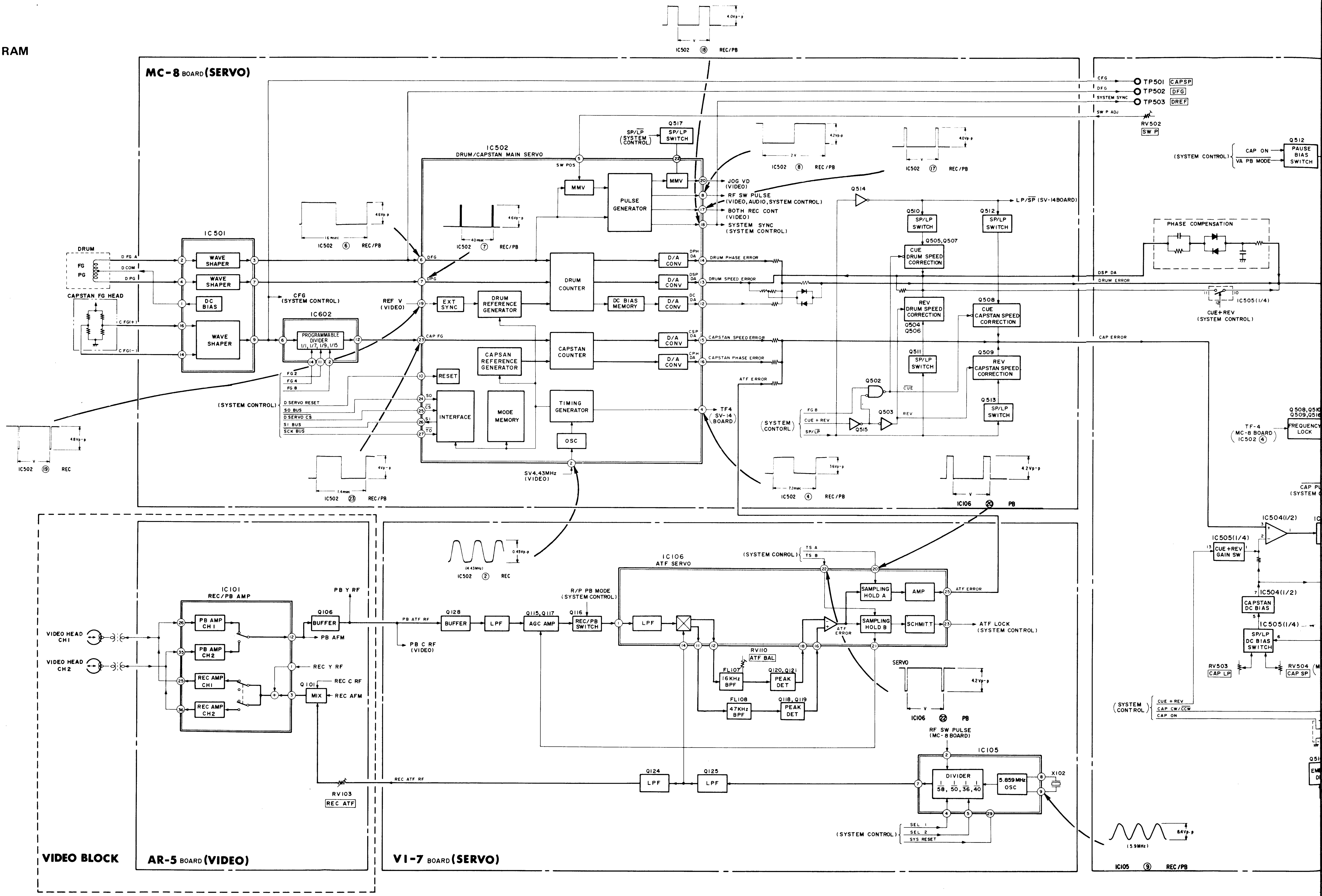
0dBs = 0.775 Vrms
f = 400 Hz

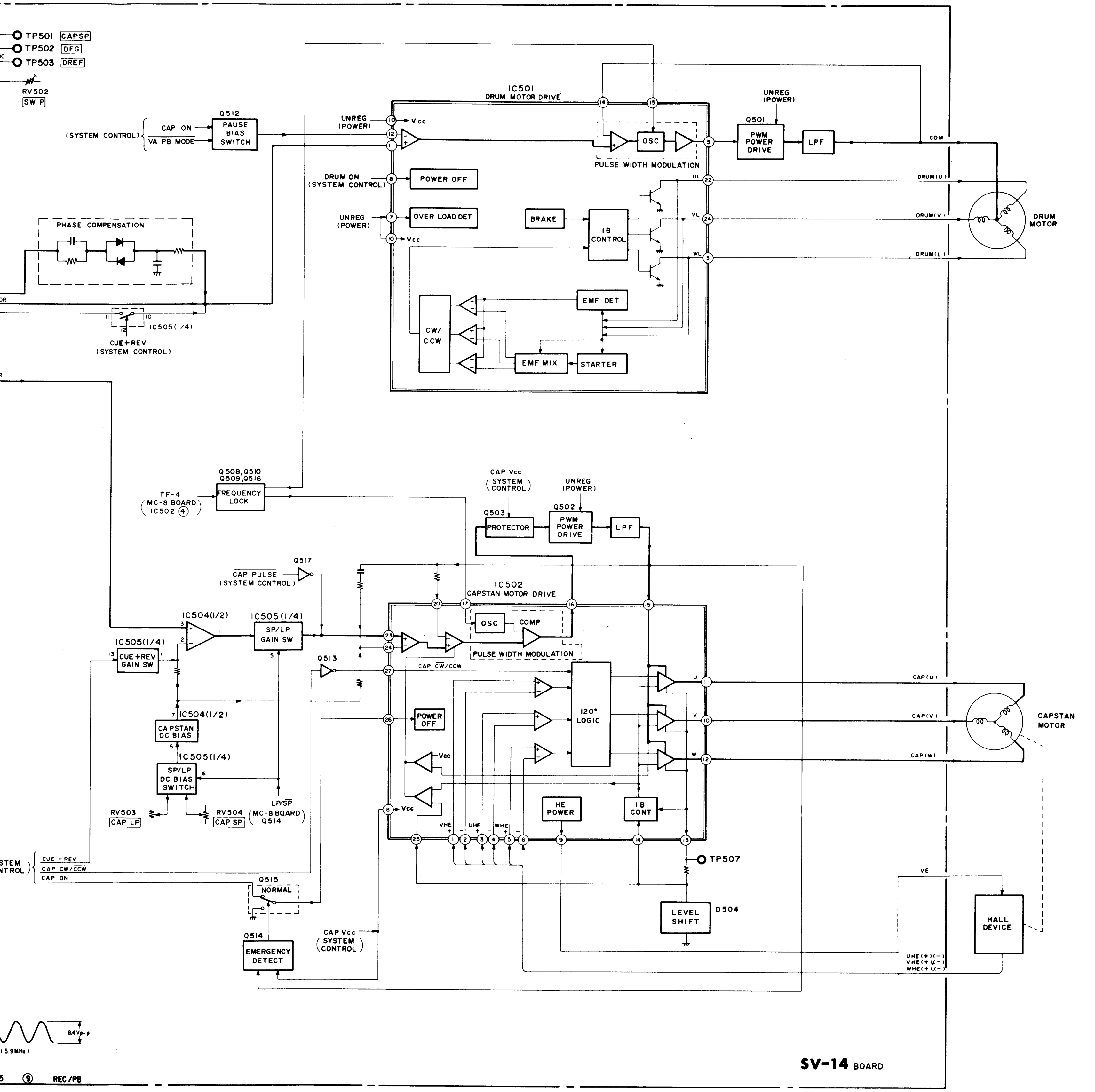

AFM IN
2
PB AMP
FM DEMOD
Ⓐ
7
8
IC401
LPF
Ⓑ
16
36
NR
Ⓒ
27
5dB AMP
Ⓓ
26
AMP
MULTI CONNECTOR
BUFFER
Ⓔ
25
Ⓕ
EARPIECE OUT



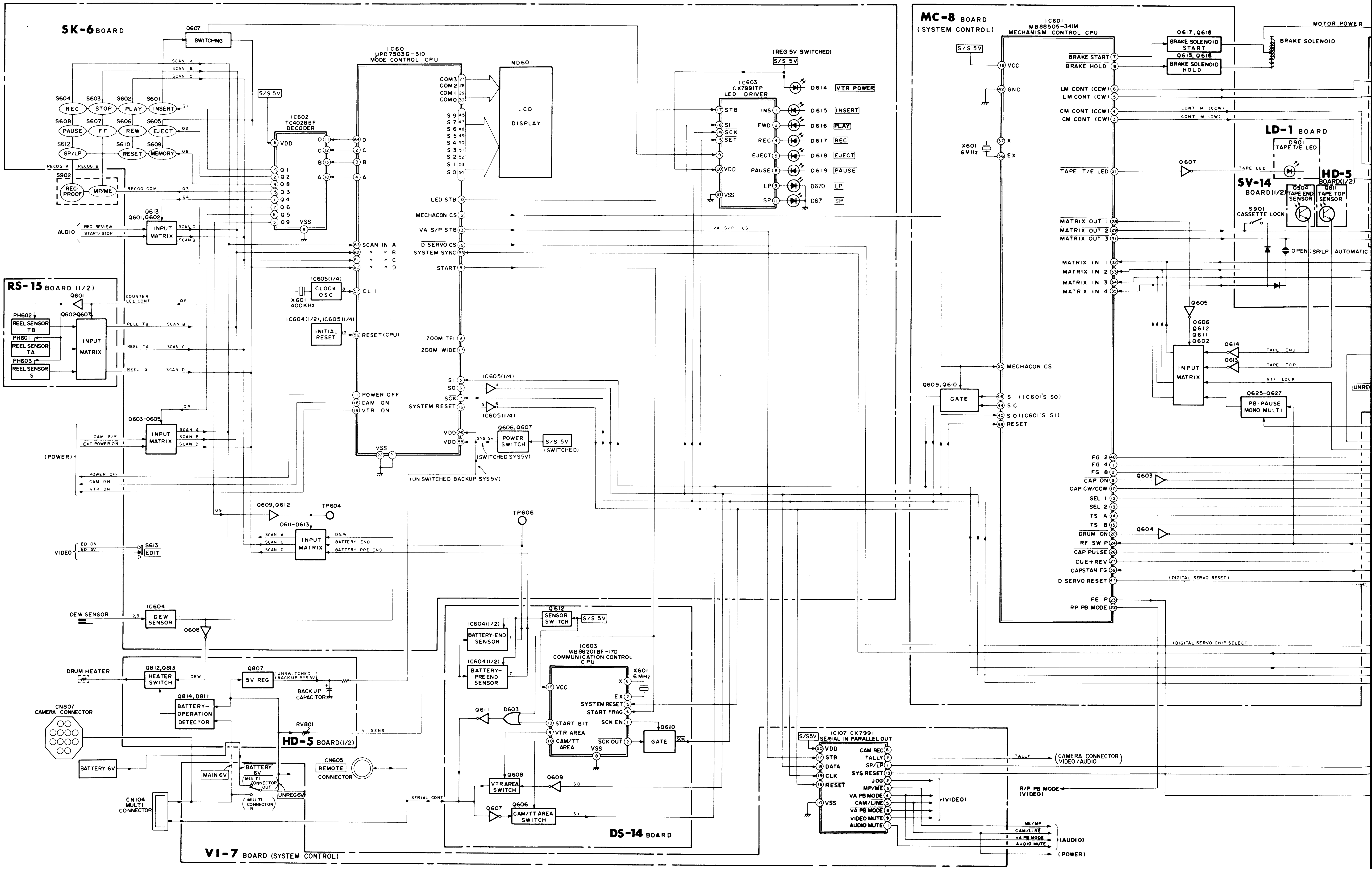
0dBs = 0.775 Vrms
f = 400 Hz

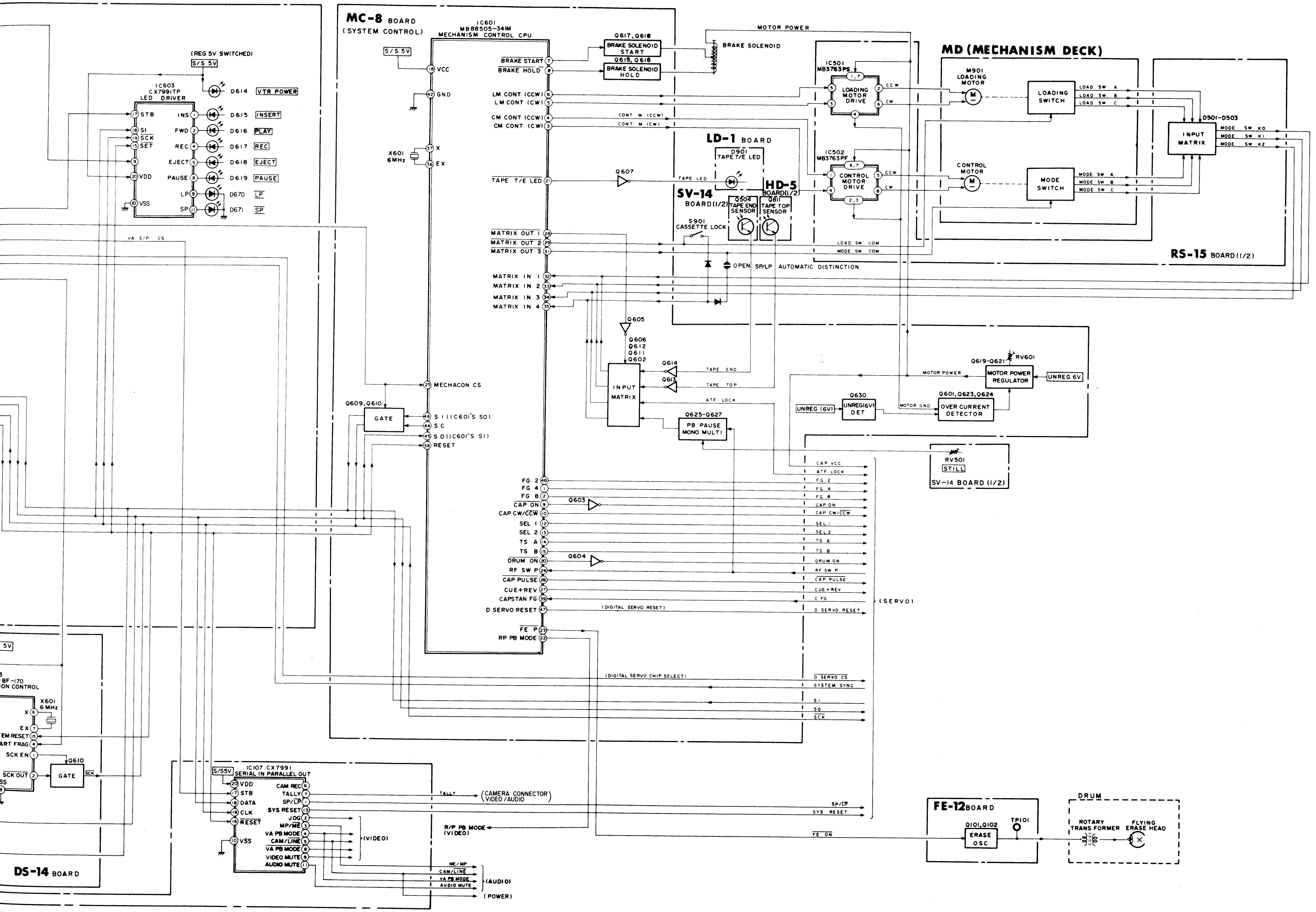
3-6. SERVO BLOCK DIAGRAM


MC-8 BOARD (SERVO)
IC502 ⑱ REC/PB
4.0Vp-p
CFG
DFG
SYSTEM SYNC
TP501 CAPSP
TP502 DFG
TP503 DREF
SW P ADJ
RV502 SW P
Q517 SP/LP SWITCH
SP/LP (SYSTEM CONTROL)
IC502 DRUM/CAPSTAN MAIN SERVO
SW POS
MMV
PULSE GENERATOR
JOG VD (VIDEO)
RF SW PULSE (VIDEO, AUDIO, SYSTEM CONTROL)
BOTH REC CONT (VIDEO)
SYSTEM SYNC (SYSTEM CONTROL)
IC502 ⑧ REC/PB
4.2Vp-p
IC502 ⑰ REC/PB
4.0Vp-p
Q514
LP/SP (SV-14 BOARD)
Q510 SP/LP SWITCH
Q512 SP/LP SWITCH
Q505, Q507
CUE DRUM SPEED CORRECTION
REV DRUM SPEED CORRECTION
Q504 Q506
Q508 CUE CAPSTAN SPEED CORRECTION
Q511 SP/LP SWITCH
Q509 REV CAPSTAN SPEED CORRECTION
Q502
Q503
Q513 SP/LP SWITCH
Q515
CUE
REV
(SYSTEM CONTROL)
FG 8
CUE + REV
SP/LP
(SYSTEM CONTROL) CAP ON
VA PB MODE
Q512 PAUSE BIAS SWITCH
PHASE COMPENSATION
DSP DA
DRUM ERROR
CAP ERROR
IC505(1/4)
CUE+REV (SYSTEM CONTROL)
DRUM
FG
PG
D FG A
D COM
D PG
CAPSTAN FG HEAD
C FG(+)
C FG(-)
IC501
WAVE SHAPER
DC BIAS
CFG (SYSTEM CONTROL)
IC602
PROGRAMMABLE DIVIDER 1/1, 1/7, 1/9, 1/15
FG 2
FG 4
FG 8
IC502 ⑥ REC/PB
4.6Vp-p
16msec
IC502 ⑦ REC/PB
40msec
REF V (VIDEO)
EXT SYNC
DRUM REFERENCE GENERATOR
DRUM COUNTER
DC BIAS MEMORY
D/A CONV
DPH DA
DRUM PHASE ERROR
DSP DA
DRUM SPEED ERROR
DC DA
CAP FG
CAPSAN REFERENCE GENERATOR
CAPSTAN COUNTER
CSP DA
CAPSTAN SPEED ERROR
CPH DA
CAPSTAN PHASE ERROR
ATF ERROR
RESET
(SYSTEM CONTROL)
D SERVO RESET
SO BUS
D SERVO CS
SI BUS
SCK BUS
SO
CS
SI
TO
INTERFACE
MODE MEMORY
TIMING GENERATOR
OSC
TF4 (SV-14 BOARD)
SV4.43MHz (VIDEO)
IC502 ㉓ REC/PB
4Vp-p
14msec
IC502 ⑲ REC
4.8Vp-p
IC502 ④ REC/PB
3.6Vp-p
7.2msec
IC106 ㉒ PB
4.2Vp-p
TF-4 (MC-8 BOARD IC502 ④)
Q508, Q510 Q509, Q516
FREQUENCY LOCK
CAP PU (SYSTEM C
IC504(1/2)
IC505(1/4)
CUE+REV GAIN SW
IC504(1/2)
CAPSTAN DC BIAS
IC505(1/4)
SP/LP DC BIAS SWITCH
RV503 CAP LP
RV504 CAP SP
(SYSTEM CONTROL)
CUE + REV
CAP CW/CCW
CAP ON
VIDEO BLOCK
AR-5 BOARD (VIDEO)
IC101 REC/PB AMP
VIDEO HEAD CH1
VIDEO HEAD CH2
PB AMP CH1
PB AMP CH2
REC AMP CH1
REC AMP CH2
Q106 BUFFER
PB Y RF
PB AFM
REC Y RF
Q101 MIX
REC C RF
REC AFM
RV103 REC ATF
REC ATF RF
V1-7 BOARD (SERVO)
IC502 ② REC
0.45Vp-p
(4.43MHz)
PB ATF RF
PB C RF (VIDEO)
Q128 BUFFER
LPF
Q115, Q117 AGC AMP
Q116 REC/PB SWITCH
R/P PB MODE (SYSTEM CONTROL)
IC106 ATF SERVO
(SYSTEM CONROL)
TS A
TS B
SAMPLING HOLD A
AMP
ATF ERROR
SAMPLING HOLD B
SCHMITT
ATF LOCK (SYSTEM CONTROL)
RV110 ATF BAL
FL107 16KHz BPF
Q120, Q121 PEAK DET
FL108 47KHz BPF
Q118, Q119 PEAK DET
SERVO
IC106 ㉒ PB
4.2Vp-p
RF SW PULSE (MC-8 BOARD)
IC105
DIVIDER 1/58, 1/50, 1/36, 1/40
5.859MHz OSC
X102
Q124 LPF
Q125 LPF
(SYSTEM CONTROL)
SEL 1
SEL 2
SYS RESET
(5.9MHz)
8.4Vp-p
IC105 ⑨ REC/PB


TP501 CAPSP
TP502 DFG
TP503 DREF
RV502
SW P
(SYSTEM CONTROL)
CAP ON
VA PB MODE
Q512
PAUSE BIAS SWITCH
PHASE COMPENSATION
IC505(1/4)
CUE+REV
(SYSTEM CONTROL)
IC501
DRUM MOTOR DRIVE
UNREG (POWER)
Vcc
DRUM ON
(SYSTEM CONTROL)
POWER OFF
UNREG (POWER)
OVER LOAD DET
BRAKE
IB CONTROL
EMF DET
CW/CCW
EMF MIX
STARTER
OSC
PULSE WIDTH MODULATION
UNREG (POWER)
Q501
PWM POWER DRIVE
LPF
COM
UL
VL
WL
DRUM(U)
DRUM(V)
DRUM(L)
DRUM MOTOR
Q508,Q510
Q509,Q516
FREQUENCY LOCK
TF-4
(MC-8 BOARD IC502 ④)
CAP Vcc
(SYSTEM CONTROL)
UNREG (POWER)
Q503
PROTECTOR
Q502
PWM POWER DRIVE
LPF
Q517
CAP PULSE
(SYSTEM CONTROL)
IC502
CAPSTAN MOTOR DRIVE
OSC
COMP
PULSE WIDTH MODULATION
IC504(1/2)
IC505(1/4)
SP/LP GAIN SW
IC505(1/4)
CUE+REV GAIN SW
Q513
CAP CW/CCW
IC504(1/2)
CAPSTAN DC BIAS
IC505(1/4)
SP/LP DC BIAS SWITCH
RV503
CAP LP
RV504
CAP SP
LP/SP
(MC-8 BOARD Q514)
POWER OFF
120° LOGIC
Vcc
Vcc
U
V
W
CAP(U)
CAP(V)
CAP(W)
CAPSTAN MOTOR
VHE
UHE
WHE
HE POWER
IB CONT
TP507
LEVEL SHIFT
D504
VE
HALL DEVICE
UHE(+)(−)
VHE(+),(−)
WHE(+),(−)
STEM
NTROL
CUE + REV
CAP CW/CCW
CAP ON
Q515
NORMAL
Q514
EMERGENCY DETECT
CAP Vcc
(SYSTEM CONTROL)
8.4Vp-p
(3.9MHz)
5
⑨
REC/PB
SV-14 BOARD

3-7. SYSTEM CONTROL BLOCK DIAGRAM


SK-6 BOARD
Q607 SWITCHING
IC601 µPD7503G-310 MODE CONTROL CPU
ND601 LCD DISPLAY
IC602 TC4028BF DECODER
S/S 5V
S604 REC
S603 STOP
S602 PLAY
S601 INSERT
S608 PAUSE
S607 FF
S606 REW
S605 EJECT
S612 SP/LP
S610 RESET
S609 MEMORY
S902 REC PROOF
MP/ME
Q613, Q601, Q602 INPUT MATRIX
AUDIO
REC REVIEW
START/STOP
RS-15 BOARD (1/2)
Q601
PH602 REEL SENSOR TB
PH601 REEL SENSOR TA
PH603 REEL SENSOR S
Q602-Q607 INPUT MATRIX
IC605(1/4) CLOCK OSC
X601 400KHz
IC604(1/2), IC605(1/4) INITIAL RESET
Q603-Q605 INPUT MATRIX
(POWER)
POWER OFF
CAM ON
VTR ON
Q606, Q607 POWER SWITCH
S/S 5V (SWITCHED)
(SWITCHED SYS5V)
(UN SWITCHED BACKUP SYS5V)
Q609, Q612
TP604
Q611-Q613 INPUT MATRIX
DEW
BATTERY END
BATTERY PRE END
VIDEO
ED ON
ED 5V
S613 EDIT
TP606
DEW SENSOR
IC604 DEW SENSOR
Q608
DRUM HEATER
Q812, Q813 HEATER SWITCH
Q807 5V REG
UNSWITCHED BACKUP SYS5V
BACK UP CAPACITOR
Q814, D811 BATTERY-OPERATION DETECTOR
RV801
V SENS
HD-5 BOARD(1/2)
CN807 CAMERA CONNECTOR
BATTERY 6V
MAIN 6V
BATTERY 6V
MULTI CONNECTOR OUT
UNREG6V
MULTI CONNECTOR IN
CN104 MULTI CONNECTOR
CN605 REMOTE CONNECTOR
SERIAL CONT
VI-7 BOARD (SYSTEM CONTROL)
DS-14 BOARD
Q612 SENSOR SWITCH
S/S 5V
IC604(1/2) BATTERY-END SENSOR
IC604(1/2) BATTERY-PREEND SENSOR
IC603 MB88201BF-170 COMMUNICATION CONTROL CPU
X601 6MHz
Q611
D603
Q610 GATE
Q608 VTR AREA SWITCH
Q609
Q607
Q606 CAM/TT AREA SWITCH
SO
SI
(REG 5V SWITCHED)
IC603 CX7991TP LED DRIVER
D614 VTR POWER
D615 INSERT
D616 PLAY
D617 REC
D618 EJECT
D619 PAUSE
D670 LP
D671 SP
MC-8 BOARD (SYSTEM CONTROL)
IC601 MB88505-341M MECHANISM CONTROL CPU
X601 6MHz
Q617, Q618 BRAKE SOLENOID START
Q615, Q616 BRAKE SOLENOID HOLD
MOTOR POWER
BRAKE SOLENOID
LD-1 BOARD
D901 TAPE T/E LED
Q607
SV-14 BOARD(1/2)
HD-5 BOARD(1/2)
Q504 TAPE END SENSOR
Q811 TAPE TOP SENSOR
S901 CASSETTE LOCK
OPEN SP/LP AUTOMATIC
Q605
Q606 Q612 Q611 Q602 INPUT MATRIX
Q614
Q613
TAPE END
TAPE TOP
ATF LOCK
Q625-Q627 PB PAUSE MONO MULTI
Q609, Q610 GATE
MECHACON CS
Q603
Q604
(DIGITAL SERVO RESET)
(DIGITAL SERVO CHIP SELECT)
IC107 CX7991 SERIAL IN PARALLEL OUT
TALLY
(CAMERA CONNECTOR VIDEO/AUDIO)
R/P PB MODE (VIDEO)
(VIDEO)
ME/MP
CAM/LINE
VA PB MODE
AUDIO MUTE
(AUDIO)
(POWER)


MC-8 BOARD
(SYSTEM CONTROL)
IC601
MB88505-341M
MECHANISM CONTROL CPU
S/S 5V
VCC
GND
X601
6MHz
X
EX
BRAKE START
BRAKE HOLD
LM CONT (CCW)
LM CONT (CW)
CM CONT (CCW)
CM CONT (CW)
TAPE T/E LED
MATRIX OUT 1
MATRIX OUT 2
MATRIX OUT 3
MATRIX IN 1
MATRIX IN 2
MATRIX IN 3
MATRIX IN 4
MECHACON CS
S I (IC601'S SO)
S C
S O (IC601'S SI)
RESET
FG 2
FG 4
FG B
CAP ON
CAP CW/CCW
SEL 1
SEL 2
TS A
TS B
DRUM ON
RF SW P
CAP PULSE
CUE+REV
CAPSTAN FG
D SERVO RESET
FE P
RP PB MODE
Q609,Q610
GATE
Q617,Q618
BRAKE SOLENOID START
Q615,Q616
BRAKE SOLENOID HOLD
MOTOR POWER
BRAKE SOLENOID
CONT M (CCW)
CONT M (CW)
Q607
TAPE LED
Q605
Q606
Q612
Q611
Q602
Q614
Q613
TAPE END
TAPE TOP
ATF LOCK
INPUT MATRIX
Q625-Q627
PB PAUSE MONO MULTI
Q603
Q604
(DIGITAL SERVO RESET)
(DIGITAL SERVO CHIP SELECT)
LD-1 BOARD
D901
TAPE T/E LED
SV-14 BOARD(1/2)
Q504
TAPE END SENSOR
HD-5 BOARD(1/2)
Q811
TAPE TOP SENSOR
S901
CASSETTE LOCK
OPEN
SP/LP AUTOMATIC DISTINCTION
LOAD SW COM
MODE SW COM
IC501
MB3763PS
LOADING MOTOR DRIVE
CCW
CW
IC502
MB3763PF
CONTROL MOTOR DRIVE
MD (MECHANISM DECK)
M901
LOADING MOTOR
LOADING SWITCH
LOAD SW A
LOAD SW B
LOAD SW C
CONTROL MOTOR
MODE SWITCH
MODE SW A
MODE SW B
MODE SW C
D501-D503
INPUT MATRIX
MODE SW K0
MODE SW K1
MODE SW K2
RS-15 BOARD(1/2)
Q619-Q621
RV601
MOTOR POWER
MOTOR POWER REGULATOR
UNREG 6V
Q630
UNREG (6V)
UNREG(6V) DET
MOTOR GND
Q601,Q623,Q624
OVER CURRENT DETECTOR
RV501
STILL
SV-14 BOARD (1/2)
CAP VCC
ATF LOCK
FG 2
FG 4
FG B
CAP ON
CAP CW/CCW
SEL 1
SEL 2
TS A
TS B
DRUM ON
RF SW P
CAP PULSE
CUE+REV
C FG
D SERVO RESET
(SERVO)
D SERVO CS
SYSTEM SYNC
SI
SO
SCK
(REG 5V SWITCHED)
S/S 5V
IC603
CX7991TP
LED DRIVER
STB
SI
SCK
SET
VDD
VSS
INS
FWD
REC
EJECT
PAUSE
LP
SP
D614
VTR POWER
D615
INSERT
D616
PLAY
D617
REC
D618
EJECT
D619
PAUSE
D670
LP
D671
SP
VA S/P CS
5V
BF-170
ON CONTROL
X601
6 MHz
X
EX
EM RESET
ART FRAG
SCK EN
SCK OUT
Q610
GATE
SCK
DS-14 BOARD
IC107 CX7991
SERIAL IN PARALLEL OUT
S/S5V
VDD
STB
DATA
CLK
RESET
VSS
CAM REC
TALLY
SP/LP
SYS RESET
JOG
MP/ME
VA PB MODE
CAM/LINE
VA PB MODE
VIDEO MUTE
AUDIO MUTE
TALLY
(CAMERA CONNECTOR VIDEO/AUDIO)
SP/LP
SYS RESET
(VIDEO)
R/P PB MODE
(VIDEO)
ME/MP
CAM/LINE
VA PB MODE
AUDIO MUTE
(AUDIO)
(POWER)
FE ON
FE-12 BOARD
Q101,Q102
ERASE OSC
TP101
DRUM
ROTARY TRANS FORMER
FLYING ERASE HEAD

3-8. SYSTEM CONTROL – CAMERA, VIDEO AND AUDIO BLOCK INTERFACE

SIGNAL	I/O	REF. NO., PIN NO.	MODE									
			STOP	FF	REW	CUE	RE-VIEW	PB	PB·PAUSE	REC	REC·PAUSE	RE-VERSE
R/P PB MODE	O	MC-8 BOARD IC601 ㉒	H	H	H	H	H	H	H	L	H	H
$\overline{\text{FEP}}$	O	MC-8 BOARD IC601 ㉓	H	H	H	H	H	H	H	L	H	H
SP/$\overline{\text{LP}}$	O	VI-7 BOARD IC107 ①	*5	*5	*5	*5	*5	*2	*5	*1	*1	*2
JOG	O	VI-7 BOARD IC107 ②	L	L	L	H	H	L	H	L	L	H
MP/$\overline{\text{ME}}$	O	VI-7 BOARD IC107 ③	*3	*3	*3	*3	*3	*3	*3	*3	*3	*3
VA PB MODE	O	VI-7 BOARD IC107 ④	L	L	L	H	H	H	H	L	L	H
CAM/$\overline{\text{LINE}}$	O	VI-7 BOARD IC107 ⑤	L*4	L*4	L*4	L*4	L*4	L*4	L*4	L*4	L*4	L*4
$\overline{\text{VA PB MODE}}$	O	VI-7 BOARD IC107 ⑧	H	H	H	L	L	L	L	H	H	L
VIDEO MUTE	O	VI-7 BOARD IC107 ⑨	L	L	L	L	L	L	L	L	L	L
AUDIO MUTE	O	VI-7 BOARD IC107 ⑪	L	L	L	H	H	L	H	L	L	H

*1. BY SP/LP SELECTOR

*2. BY RECORDED TAPE

*3. BY USING TAPE

*4. IT BECOMES INTO "H" WHEN $\overline{\text{CAM}}$/VTR SIGNAL (HD-5 BOARD PIN ⑦ OF IC803) IS IN "L" WHEN THE CAMERA IS IN USE.

*5. HOLDS THE PREVIOUS LEVEL

3-9. MECHANISM CONTROL CPU – SERVO BLOCK INTERFACE (MC-8 BOARD)

SIGNAL	I/O	REF. NO., PIN NO.	MODE									
			STOP	FF	REW	CUE	RE-VIEW	PB	PB·PAUSE	REC	REC·PAUSE	RE-VERSE
CAP FG	I	IC601 ㊴										
RF. SW PULSE	I	IC601 ㉔										
MONO MULTI	I	IC601 MATRIX IN 4 ㉟										
ATF LOCK	I	IC601 MATRIX IN 3 ㉞										
$\overline{\text{DRUM ON}}$	O	IC601 ⑳	H	L	L	L	L	L	L	L	L	L
$\overline{\text{CAP ON}}$	O	IC601 ⑨	H	L	L	L	L	L	H	L	H	L
CAP CW/$\overline{\text{CCW}}$	O	IC601 ⑩	L	L	H	L	H	L	L	L	L	H
D SERVO RESET	O	IC601 ㊼	L	L	L	L	L	L	L	L	L	L
$\overline{\text{CAP PULSE}}$	O	IC601 ㉖	L	L	L	L	L	L	L	L	L	L
CUE + REVIEW	O	IC601 ㉗	L	L	L	H	H	L	L	L	L	L
FG2 *1	O	IC601 ㊽	L	H	H	L	H	L	L	L	L	L
FG4 *1	O	IC601 ①	L	L	L	L	H	L	L	L	L	L
FG8 *1	O	IC601 ②	L	H	H	H	L	L	L	L	L	L
SEL1	O	IC601 ⑫										
SEL2	O	IC601 ⑬										
TSA	O	IC601 ⑭										
TSB	O	IC601 ⑮										

*1 THE CHANGE IN THE DIVIDING RATIO OF IC602 BY THE VARIATION OF SIGNALS FG2, FG4 AND FG8.

SIGNAL \ MODE	SP			LP			FF/REW
	FWD	CUE	RE-VIEW	FWD	CUE	RE-VIEW	
CFG (Hz) (IC602 ⑥)	1340	12677	8900	670	6194	4577	
CAPFG (Hz) (IC602 ⑫)	1340	1409	1271	670	688	654	
FG2 (IC602 ⑪)	L	L	H	L	L	H	H
FG4 (IC602 ⑭)	L	L	H	L	L	H	L
FG8 (IC602 ②)	L	H	L	L	H	L	H
$\frac{\text{CFG}}{\text{CAPFG}}$	1/1	1/9	1/7	1/1	1/9	1/7	1/11

3-10. SYSTEM CONTROL – MECHANISM BLOCK INTERFACE

SIGNAL	I/O	REF. NO., PIN NO.	STOP	FF	REW	CUE	RE-VIEW	PB	PB·PAUSE	REC	REC·PAUSE	RE-VERSE
MODE SW *1	I	MC-8 BOARD IC601 MATRIX IN	3	6	6	1	5	1	1	1	1	5
LOAD SW *2	I	MC-8 BOARD IC601 MATRIX IN	3	3	3	3	3	3	3	3	3	3
CASSETTE LOCK SW	I	MC-8 BOARD IC601 MATRIX IN	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
$\overline{\text{TAPE TOP}}$ *4	I	MC-8 BOARD IC601 MATRIX IN	NC	NC	H	H/NC	H	NC	NC	NC	H	H
$\overline{\text{TAPE END}}$ *4	I	MC-8 BOARD IC601 MATRIX IN	H/NC	H	NC	H	H	H	H	H	H	H
REEL TA	I	SK-6 BOARD IC601 MATRIX IN										
REEL TB	I	SK-6 BOARD IC601 MATRIX IN										
REEL S	I	SK-6 BOARD IC601 MATRIX IN										
CM CONT (CW)	O	MC-8 BOARD IC601 ③	L	L	L	L	L	L	L	L	L	L
CM CONT (CCW)	O	MC-8 BOARD IC601 ④	L	L	L	L	L	L	L	L	L	L
LM CONT (CW)	O	MC-8 BOARD IC601 ⑤	L	L	L	L	L	L	L	L	L	L
LM CONT (CCW)	O	MC-8 BOARD IC601 ⑥	L	L	L	L	L	L	L	L	L	L
$\overline{\text{BRAKE START}}$	O	MC-8 BOARD IC601 ⑦	H	H	H	H	H	H	H	H	H	H
$\overline{\text{BRAKE HOLD}}$	O	MC-8 BOARD IC601 ⑧	H	L	L	H	L	H	H	H	H	L
$\overline{\text{TAPE T/E LED}}$	O	MC-8 BOARD IC601 ㉑	*3	*3	*3	*3	*3	*3	*3	*3	*3	*3

*1 REFER TO "MODE SWITCH PATTERN."

*2 REFER TO "LOADING SWITCH PATTERN."

*3 REGULAR PULSE

*4 "NC" INDICATES THAT THE IC601 DOES NOT PERFORM DETECTION.

3-11. MODE SWITCH PATTERN

(↻) CW ← MODE SWITCH ROTATING DIRECTION → CCW (↺)

SWITCH POSITION (MODE)		EJECT		LOAD		FF/REW		STOP		FWD		RVS	
SWITCH PATTERN	7	4	7	2	7	6	7	3	7	1	7	5	7
MODE SW A	×	○	×	○	×	○	×	×	×	×	×	×	×
MODE SW B	×	○	×	×	×	×	×	×	×	○	×	○	×
MODE SW C	×	×	×	○	×	×	×	○	×	○	×	×	×

○ . . . CLOSE , × . . . OPEN

3-12. LOADING SWITCH PATTERN

(↺) CCW ← LOADING SWITCH ROTATING DIRECTION → CW (↻)

SWITCH POSITION	LOADING TOP		UNLOAD WAITE		DRUM START		T REEL START		LOADING END
SWITCH PATTERN	1	7	5	7	4	7	6	7	3
LOAD SW A	×	×	×	×	○	×	○	×	×
LOAD SW B	○	×	○	×	○	×	×	×	×
LOAD SW C	○	×	×	×	×	×	×	×	○

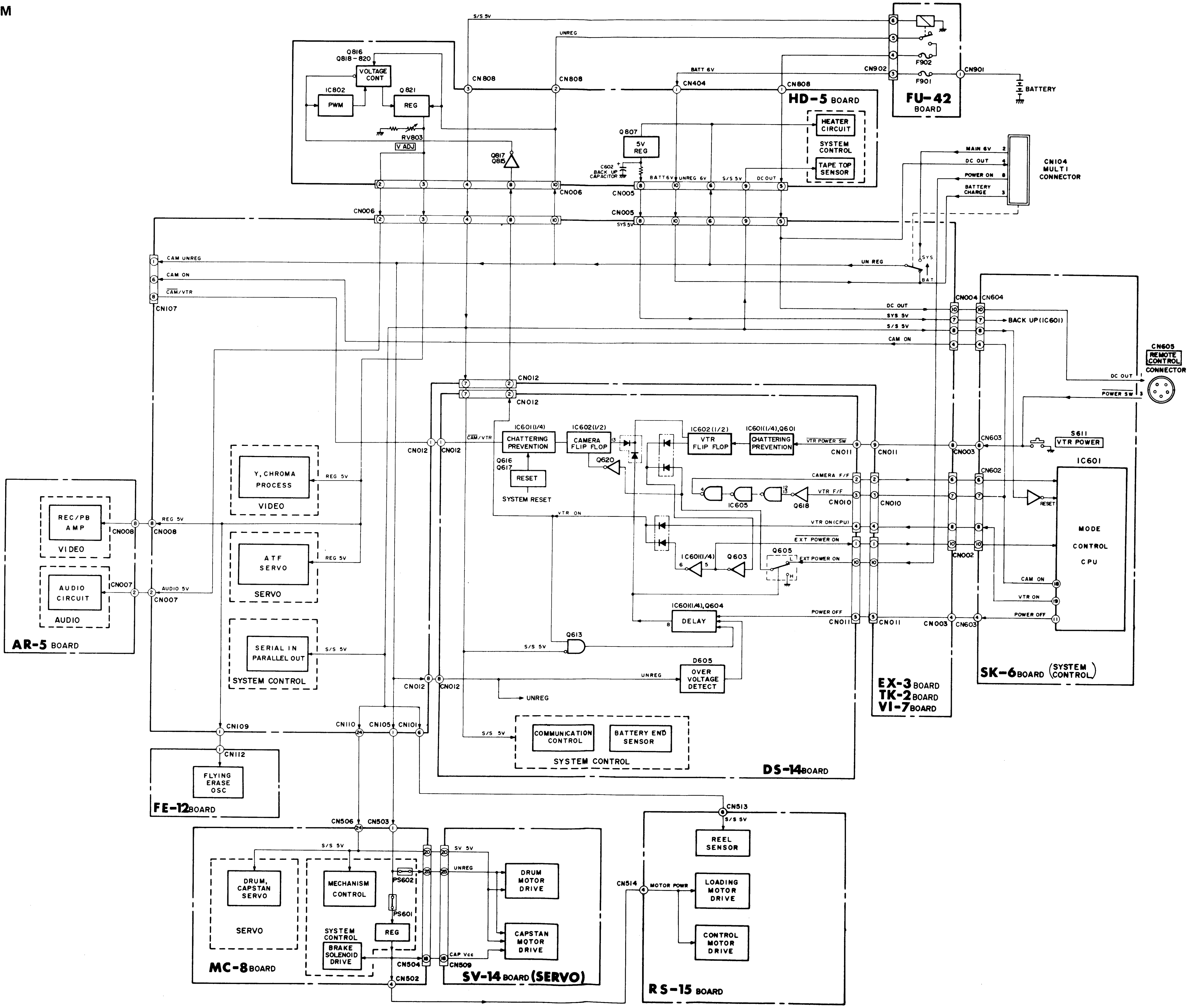
○ . . . CLOSE , × . . . OPEN

3-13. SYSTEM CONTROL – CAMERA CONNECTOR INTERFACE

SIGNAL	I/O	REF. NO., PIN NO.	MODE									
			STOP	FF	REW	CUE	RE-VIEW	PB	PB·PAUSE	REC	REC·PAUSE	RE-VERSE
START/STOP	I	SK-6 BOARD IC601 MATRIX IN										
REC-REVIEW	I	SK-6 BOARD IC601 MATRIX IN										
CAM FF	I	SK-6 BOARD IC601 MATRIX IN	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]
CAM ON	O	SK-6 BOARD IC601 ⑱	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]	L[*1]
TALLY	O	VI-7 BOARD IC107⑦	L	L	L	L	L	L	L	L[*1]	L	L
VA PB MODE	O	VI-7 BOARD IC107④	L	L	L	H	H	H	H	L	L	H
SERIAL CONT	I/O	INNER BUS (SI, SO)										

[*1] IT BECOMES INTO "H" WHEN $\overline{\text{CAM}}$/VTR SIGNAL (HD-5 BOARD PIN⑦ OF IC803) IS IN "L" WHEN THE CAMERA IS IN USE.

3-14. POWER BLOCK DIAGRAM


S/S 5V
UNREG
BATT 6V
Q816
Q818-820
VOLTAGE CONT
IC802
PWM
Q821
REG
RV803
V ADJ
Q817
Q815
CN808
CN404
CN902
CN901
F902
F901
BATTERY
FU-42 BOARD
HD-5 BOARD
HEATER CIRCUIT
SYSTEM CONTROL
TAPE TOP SENSOR
Q807
5V REG
C602 BACK UP CAPACITOR
BATT6V
UNREG 6V
S/S 5V
DC OUT
CN006
CN005
SYS 5V
MAIN 6V
DC OUT
POWER ON
BATTERY CHARGE
CN104 MULTI CONNECTOR
CAM UNREG
CAM ON
CAM/VTR
CN107
UN REG
SYS
BAT
CN004
CN604
DC OUT
SYS 5V
S/S 5V
CAM ON
BACK UP (IC601)
CN605 REMOTE CONTROL CONNECTOR
DC OUT
POWER SW
CN012
IC601(1/4)
CHATTERING PREVENTION
IC602(1/2)
CAMERA FLIP FLOP
IC602(1/2)
VTR FLIP FLOP
IC601(1/4),Q601
CHATTERING PREVENTION
VTR POWER SW
CN011
CN003
CN603
S611
VTR POWER
Q616
Q617
RESET
SYSTEM RESET
Q620
CAMERA F/F
VTR F/F
IC605
Q618
CN010
CN602
IC601
RESET
MODE CONTROL CPU
VTR ON
VTR ON(CPU)
EXT POWER ON
IC601(1/4)
Q603
Q605
EXT POWER ON
CN002
CAM ON
VTR ON
POWER OFF
IC601(1/4),Q604
DELAY
Q613
S/S 5V
D605
OVER VOLTAGE DETECT
UNREG
UNREG
EX-3 BOARD
TK-2 BOARD
VI-7 BOARD
SK-6 BOARD (SYSTEM CONTROL)
Y, CHROMA PROCESS
VIDEO
REG 5V
ATF SERVO
SERVO
REG 5V
SERIAL IN PARALLEL OUT
SYSTEM CONTROL
S/S 5V
REC/PB AMP
VIDEO
CN008
REG 5V
AUDIO CIRCUIT
AUDIO
CN007
AUDIO 5V
AR-5 BOARD
COMMUNICATION CONTROL
BATTERY END SENSOR
SYSTEM CONTROL
S/S 5V
DS-14 BOARD
CN109
CN110
CN105
CN101
CN112
FLYING ERASE OSC
FE-12 BOARD
CN506
CN503
S/S 5V
DRUM, CAPSTAN SERVO
SERVO
MECHANISM CONTROL
PS602
PS601
REG
SYSTEM CONTROL
BRAKE SOLENOID DRIVE
CN504
CN502
MC-8 BOARD
5V 5V
UNREG
DRUM MOTOR DRIVE
CAPSTAN MOTOR DRIVE
CAP Vcc
CN509
SV-14 BOARD (SERVO)
CN513
S/S 5V
REEL SENSOR
CN514
MOTOR POWR
LOADING MOTOR DRIVE
CONTROL MOTOR DRIVE
RS-15 BOARD

3-15. MODE CONTROL CPU (IC601) TERMINAL FUNCTIONS (SK-6 BOARD)

Pin No.	Pin Name	I/O	Function
1	NC		
2	MATRIX OUT control-C	O	Output for matrix decoder
3	MATRIX OUT control-B	O	Output for matrix decoder
4	MATRIX OUT control-A	O	Output for matrix decoder
5	SI	I	Serial input data on inner bus
6	SO	O	Serial output data on inner bus
7	SCK	I/O	Inner bus clock
8	START	O	Communication-CPU start flag output
9	ZOOM TEL	O	Not used
10	LED STB	O	Data strobe for LED display serial-in/parallel-out (CX7991)
11	POWER OFF	O	Power-off control
12	MECHACON CS	O	High while communicating with mechanism-control CPU
13	VA S/P STB	O	Data strobe for audio/video serial-in/parallel-out (CX7991)
14	Not used		
15	D SERVO CS	O	High while communicating with servo IC (CX20035)
16	SYSTEM RESET	O	Output to reset system when power supply goes on
17	ZOOM WIDE	O	Not used
18	CAM ON	O	Camera input/Line input selection control signal (camera mode . . . "H")
19	VTR ON	O	High while VTR power supply is on
20	X2		Not used
21	X1	(I)	Not used
22	V_{SS}	I	GND
23	V_{LC3}	O	LCD drive voltage control
24	V_{LC2}	O	LCD drive voltage control
25	V_{LC1}	O	LCD drive voltage control
26	V_{DD}	I	SYS 5V (unswitched)
27	COM3	O	LCD common signal output
28	COM2	O	LCD common signal output
29	COM1	O	LCD common signal output
30	COM0	O	LCD common signal output
31 | 44	Not used		
45	S9	O	LCD segment signal output
46	S8	O	Not used
47	S7	O	LCD segment signal output
48	S6	O	LCD segment signal output
49	S5	O	LCD segment signal output
50	S4	O	LCD segment signal output
51	S3	O	LCD segment signal output
52	S2	O	LCD segment signal output
53	S1	O	LCD segment signal output
54	S0	O	LCD segment signal output
55	INIT1	I	External interruption request (SYSTEM SYNC input) from servo IC (CX-20035)
56	RESET	I	Mode control reset
57	CL1	I	External system clock input
58	V_{DD}	I	SYS 5V (unswitched)
59	Not used		
60	SCAN IN D	I	Matrix input
61	SCAN IN C	I	Matrix input
62	SCAN IN B	I	Matrix input
63	SCAN IN A	I	Matrix input
64	MATRIX OUT control-D	I	Output for matrix decoder

3-16. MECHANISM CONTROL CPU (IC601) TERMINAL FUNCTIONS (MC-8 BOARD)

Pin No.	Pin Name	I/O	Function
1	FG4	O	Capstan FG count-down by 1/4
2	FG8	O	Capstan FG count-down by 1/8
3	CM CONT (CW)	O	Control-motor revolution (clockwise/counterclockwise) control CW
4	CM CONT (CCW)	O	Control-motor revolution (clockwise/counterclockwise) control CCW
5	LM CONT (CW)	O	Loading-motor revolution (clockwise/counterclockwise) control CW
6	LM CONT (CCW)	O	Loading-motor revolution (clockwise/counterclockwise) control CCW
7	BRAKE START	O	Main brake start control
8	BRAKE HOLD	O	Main brake hold control
9	CAP ON	O	Capstan-on control
10	CAP CW/CCW	O	Capstan revolution (clockwise/counterclockwise) control
11	NC		
12	SEL 1	O	ATF pilot select-1
13	SEL 2	O	ATF pilot select-2
14	TS A	O	ATF error voltage hold
15	TS B	O	ATF lock hold
16	NC		
17	NC		
18	S/S 5V	I	S/S 5V power supply (Switched)
19	NC		
20	DRUM ON	O	Drum-on control
21	TAPE T/E LED	O	Top/end-of-tape LED control
22	RP PB MODE	O	RP amplifier control
23	FEP	O	Flying erase-head control
24	RF SW P	I	RF switching pulse input
25	MECHACON CS	I	Mode-control-CPU communication request
26	CAP PULSE	O	Capstan drive voltage maximizing signal
27	CUE + REVIEW	O	High for cue/review operation
28	MATRIX OUT 1	O	Matrix output
29	MATRIX OUT 2	O	Matrix output
30	NC		
31	MATRIX OUT 3	O	Matrix output
32	MATRIX IN 1	I	Matrix input
33	MATRIX IN 2	I	Matrix input
34	MATRIX IN 3	I	Matrix input
35	MATRIX IN 4	I	Matrix input
36	EX	I	Clock generator input
37	X	O	Clock generator output
38	RESET	I	Mechanism-control-CPU reset signal (system reset) issued from mode-control CPU
39	FG	I	Capstan FG input
40	NC		
41	NC		
42	GND		GND
43	NC		
44	SCK	O	8 clock output connected to inner-bus SCK line when MECHACONCS is at High.
45	SO	I	Input terminal of serial data from mode-control CPU, which is connected to inner-bus SO line
46	SI	O	Output terminal of serial data to mode-control CPU, which is connected to inner-bus SI line
47	D SERVO RESET	O	Reset signal for servo control IC (CX20035)
48	FG 2	O	Capstan FG count-down by 1/2

3-17. COMMUNICATION CONTROL CPU (IC603) TERMINAL FUNCTIONS (DS-14 BOARD)

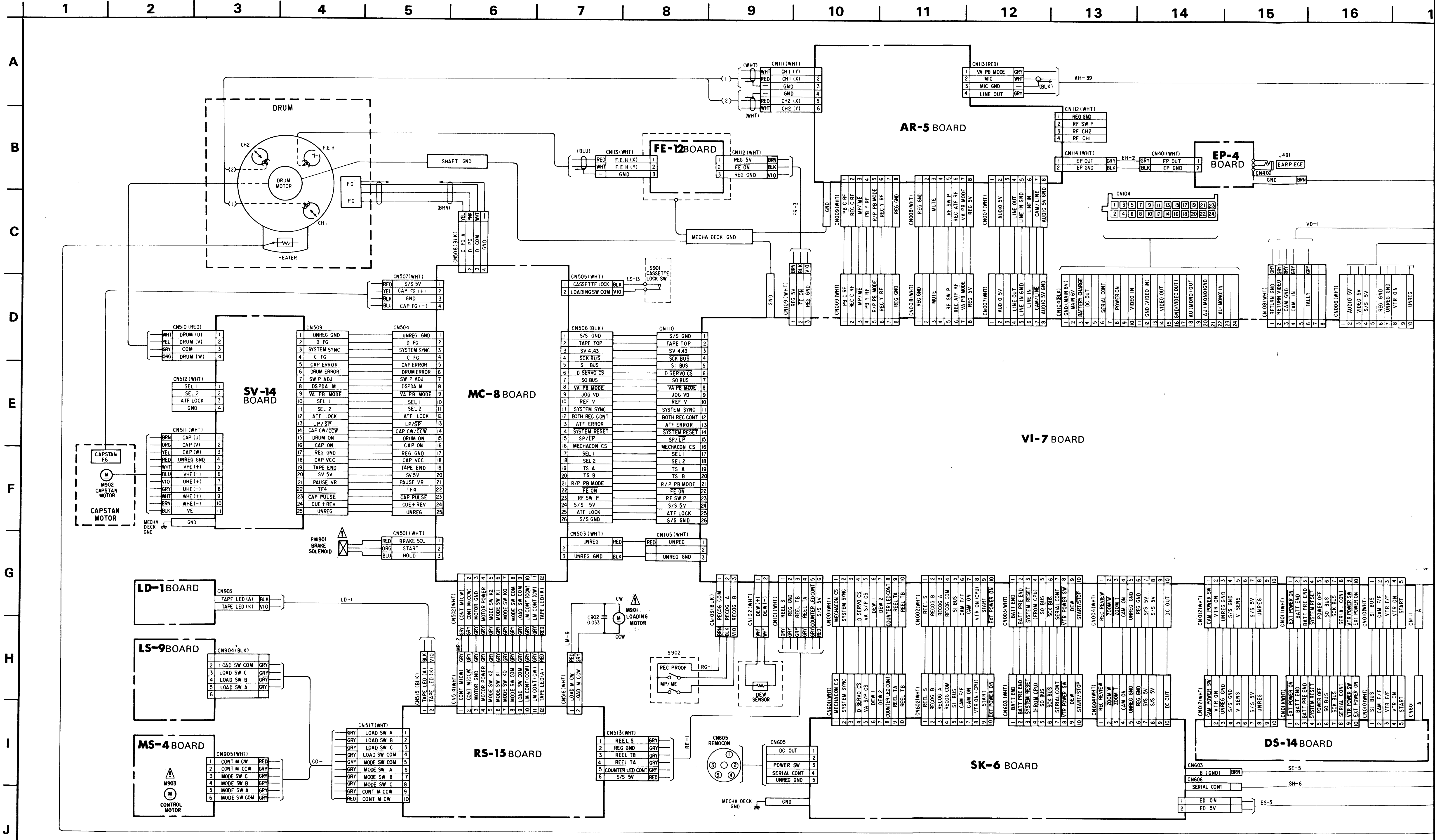
Pin No.	Pin Name	I/O	Function
1	SCK EN	O	Clock output enable
2	$\overline{\text{SCK OUT}}$	O	Clock issued to inner bus
3	INVALID FLAG	O	Not used
4	START FLAG	I	Communication start from mode-control CPU
5	MODE	I	Open
6	X	O	Clock generator output
7	EX	I	Clock generator input
8	Vss	I	GND
9	VTR AREA	O	Data communication time at High (Inner bus → External bus)
10	CAM/TT AREA	O	Data communication time at High (External bus → Inner bus)
11	TT AREA	O	Not used
12	CAM AREA	O	Not used
13	START BIT	O	Start bit on external CTRL-L bus
14	CAM CS		Not used
15	$\overline{\text{SYSTEM RESET}}$	I	Communication control CPU reset issued from mode-control CPU
16	Vcc		S/S 5V power supply (Switched)

3-18. SERIAL-IN/PARALLEL-OUT FOR AUDIO/VIDEO SIGNAL (IC107) TERMINAL FUNCTIONS (VI-7 BOARD)

Pin No.	Pin Name	I/O	Function
1	SP/$\overline{\text{LP}}$ (P1)	O	SP/$\overline{\text{LP}}$ mode select Signal
2	JOG (P2)	O	JOG mode
3	MP/$\overline{\text{ME}}$ (P3)	O	Type-of-tape select
4	VA PB MODE (P4)	O	Playback mode (High)
5	CAM/$\overline{\text{LINE}}$ (P5)	O	Camera/line select
6	CAM REC (P6)	O	Not used
7	TALLY (P7)	O	Tally indication output for camera
8	$\overline{\text{VA PB MODE}}$ (P8)	O	Playback mode (Low)
9	VIDEO MUTE (P9)	O	Video mute control
10	Vss		GND
11	AUDIO MUTE (P10)	O	Audio mute control
12	(P11)	O	
13	SYS RESET (P12)	O	System reset output
14	SO		Not used
15	$\overline{\text{SET}}$		Connected to VDD
16	$\overline{\text{RESET}}$		Connected to VDD
17	STB	I	It is connected to the V/A SP STP (strobe) coming from the mode control CPU, and it latches the data to the internal resistor at "H".
18	SI (DATA)	I	Input terminal of serial data from mode-control CPU, which is connected to inner bus SO line
19	CLK	I	Clock input from mode-control CPU, which is connected to inner bus SCK line
20	VDD		S/S 5V

SECTION 4
SCHEMATIC DIAGRAM AND PRINTED WIRING BOARDS

4-1. FRAME SCHEMATIC DIAGRAM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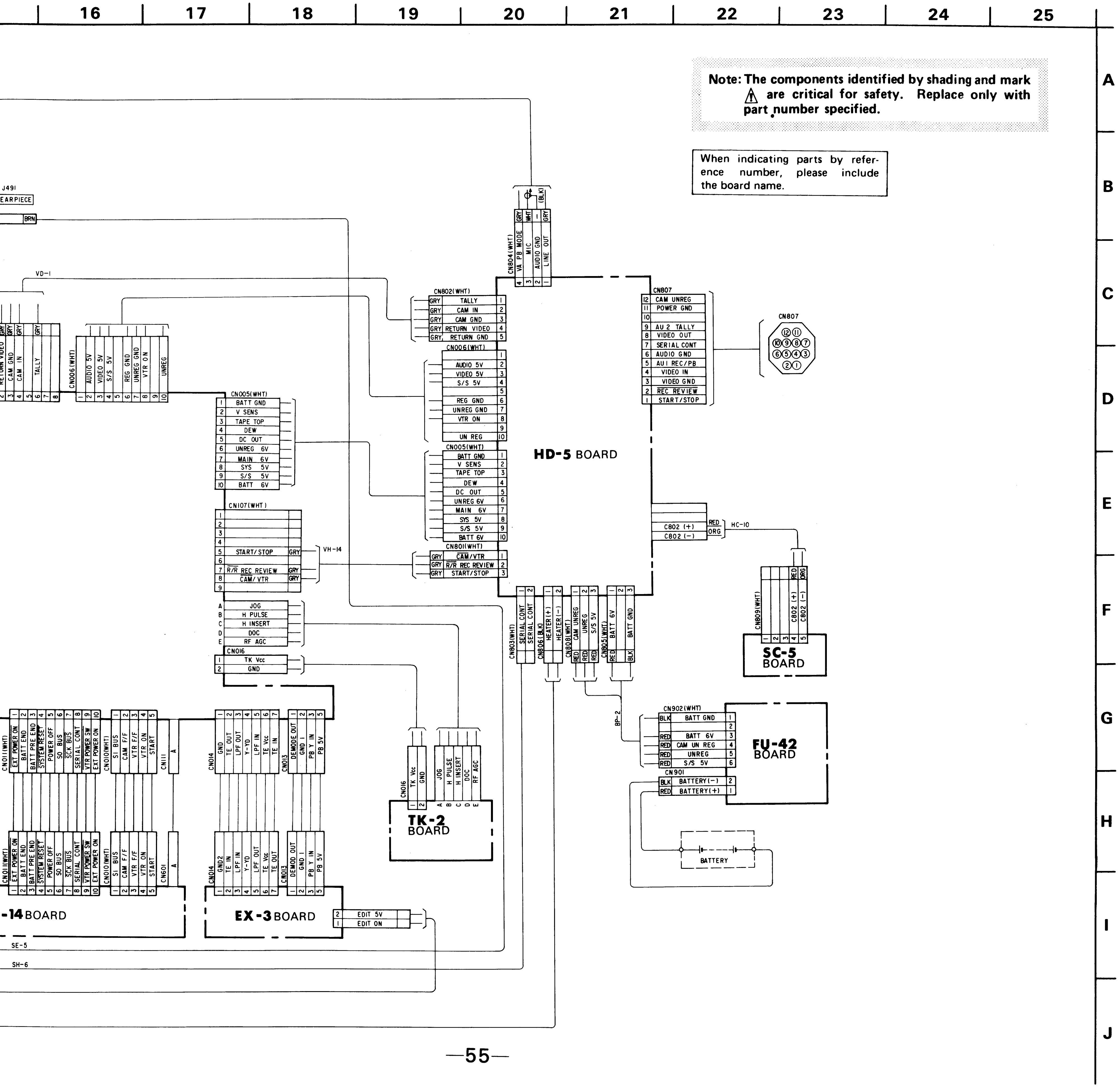
CH1
F.E.H
DRUM MOTOR
FG
PG
HEATER
SHAFT GND
FE-12 BOARD
CN113 (WHT)
CN112 (WHT)
F.E.H (X)
F.E.H (Y)
REG 5V
FE ON
REG GND
MECHA DECK GND
CN111 (WHT)
CH1 (Y)
CH1 (X)
CH2 (X)
CH2 (Y)
CN113 (RED)
VA PB MODE
MIC
MIC GND
LINE OUT
AH-39
AR-5 BOARD
CN112 (WHT)
RF SW P
RF CH2
RF CH1
CN114 (WHT)
EP OUT
EP GND
EH-2
CN401 (WHT)
EP-4 BOARD
J491
EARPIECE
CN402
CN104
CN009 (WHT)
CN008 (WHT)
CN007 (WHT)
FR-3
VD-1
CN508 (BLK)
D FG A
D PG
D COM
CN507 (WHT)
S/S 5V
CAP FG (+)
CAP FG (−)
CN505 (WHT)
CASSETTE LOCK
LOADING SW COM
LS-13
S901 CASSETTE LOCK SW
CN510 (RED)
DRUM (U)
DRUM (V)
COM
DRUM (W)
CN512 (WHT)
SEL 1
SEL 2
ATF LOCK
SV-14 BOARD
CN511 (WHT)
CAP (U)
CAP (V)
CAP (W)
UNREG GND
VHE (+)
VHE (−)
UHE (+)
UHE (−)
WHE (+)
WHE (−)
VE
CAPSTAN FG
M902 CAPSTAN MOTOR
CAPSTAN MOTOR
MECHA DECK GND
CN509
CN504
MC-8 BOARD
CN506 (BLK)
CN110
CN109 (WHT)
CN104 (BLK)
CN108 (WHT)
CN006 (WHT)
VI-7 BOARD
PM901 BRAKE SOLENOID
CN501 (WHT)
BRAKE SOL
START
HOLD
CN503 (WHT)
CN105 (WHT)
UNREG
UNREG GND
LD-1 BOARD
CN903
TAPE LED (A)
TAPE LED (K)
LD-1
LS-9 BOARD
CN904 (BLK)
LOAD SW COM
LOAD SW C
LOAD SW B
LOAD SW A
MS-4 BOARD
CN905 (WHT)
CONT M CW
CONT M CCW
MODE SW C
MODE SW B
MODE SW A
MODE SW COM
M903 CONTROL MOTOR
CO-1
CN502 (WHT)
MR-2
CN515 (BLK)
CN514 (WHT)
CN516 (WHT)
LOAD M CW
LOAD M CCW
LM-9
M901 LOADING MOTOR
C902 0.033
CW
CCW
CN517 (WHT)
RS-15 BOARD
CN513 (WHT)
REEL S
REG GND
REEL TB
REEL TA
COUNTER LED CONT
S/S 5V
RE-1
S902
REC PROOF
MP/ME
RG-1
DEW SENSOR
CN103 (BLK)
CN102 (WHT)
CN101 (WHT)
CN001 (WHT)
CN002 (WHT)
CN003 (WHT)
CN004 (WHT)
CN012 (WHT)
CN011 (WHT)
CN010 (WHT)
CN111
CN601 (WHT)
CN602 (WHT)
CN603 (WHT)
CN604 (WHT)
CN605 REMOCON
CN605
DC OUT
POWER SW
SERIAL CONT
UNREG GND
SK-6 BOARD
DS-14 BOARD
CN603
B (GND)
SE-5
CN606
SERIAL CONT
SH-6
ED ON
ED 5V
ES-5
MECHA DECK GND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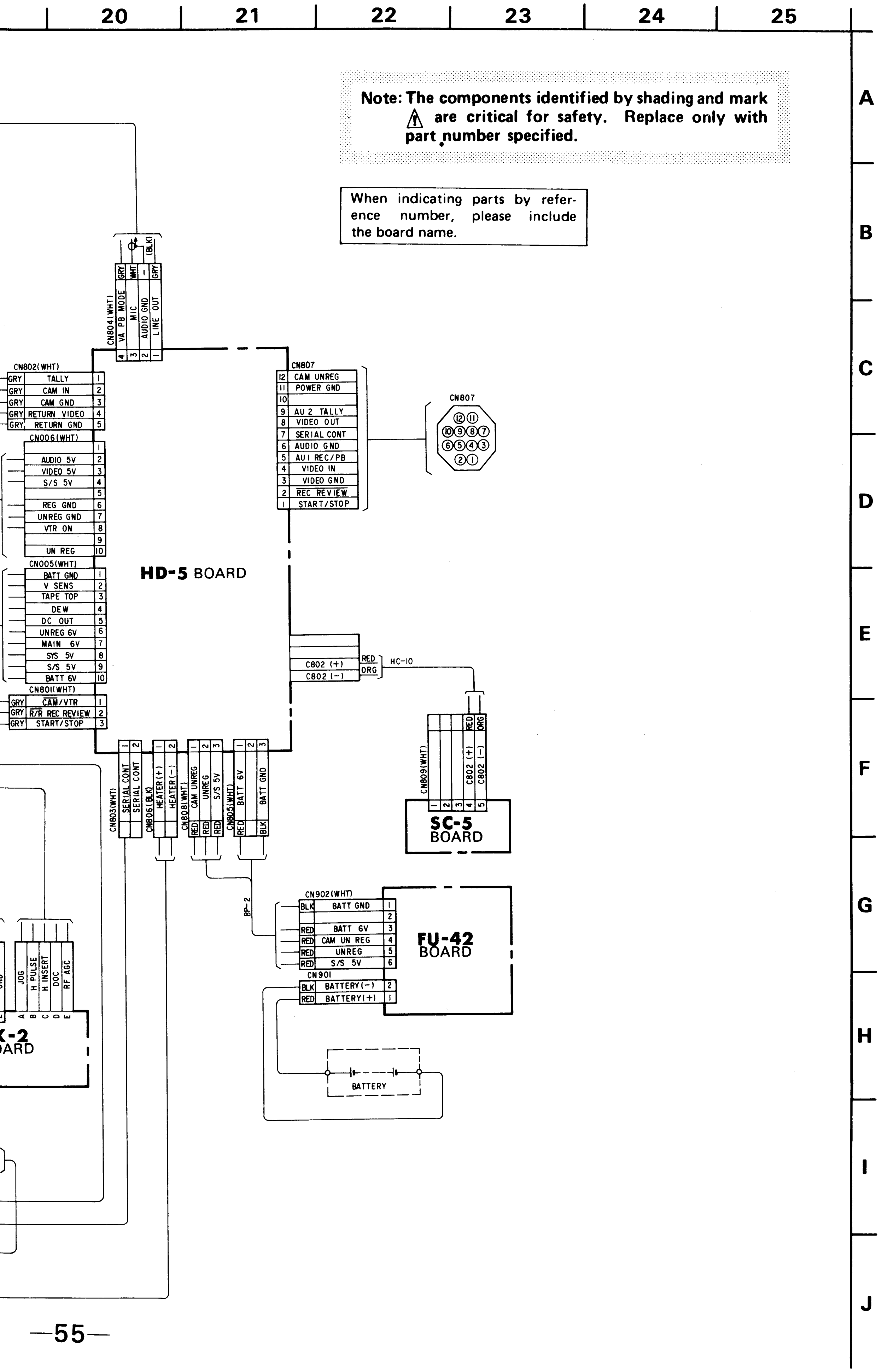
J
J491
EARPIECE
BRN
VD-1
CN802(WHT)
TALLY
CAM IN
CAM GND
RETURN VIDEO
RETURN GND
CN006(WHT)
AUDIO 5V
VIDEO 5V
S/S 5V
REG GND
UNREG GND
VTR ON
UN REG
CN005(WHT)
BATT GND
V SENS
TAPE TOP
DEW
DC OUT
UNREG 6V
MAIN 6V
SYS 5V
S/S 5V
BATT 6V
CN107(WHT)
START/STOP
R/R REC REVIEW
CAM/VTR
VH-14
CN801(WHT)
JOG
H PULSE
H INSERT
DOC
RF AGC
CN016
TK Vcc
GND
CN804(WHT)
VA PB MODE
MIC
AUDIO GND
LINE OUT
BLK
GRY
WHT
HD-5 BOARD
CN807
CAM UNREG
POWER GND
AU 2 TALLY
VIDEO OUT
SERIAL CONT
AUDIO GND
AU1 REC/PB
VIDEO IN
VIDEO GND
REC REVIEW
START/STOP
C802 (+)
C802 (−)
RED
ORG
HC-10
CN809(WHT)
SC-5 BOARD
CN803(WHT)
SERIAL CONT
CN806(BLK)
HEATER(+)
HEATER(−)
CN808(WHT)
CAM UNREG
UNREG
S/S 5V
CN805(WHT)
BATT 6V
BATT GND
BP-2
CN902(WHT)
BATT GND
BATT 6V
CAM UN REG
UNREG
S/S 5V
CN901
BATTERY(−)
BATTERY(+)
FU-42 BOARD
BATTERY
CN011(WHT)
EXT POWER ON
BATT END
BATT PRE END
SYSTEM RESET
POWER OFF
SO BUS
SCK BUS
SERIAL CONT
VTR POWER SW
EXT POWER ON
CN010(WHT)
SI BUS
CAM F/F
VTR F/F
VTR ON
START
CN111
CN601
A
CN014
GND2
TE OUT
TE IN
LPF OUT
LPF IN
Y-YD
TE Vcc
CN013
DEMODE OUT
GND 1
PB Y IN
PB 5V
TK-2 BOARD
-14 BOARD
EX-3 BOARD
EDIT 5V
EDIT ON
SE-5
SH-6

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.


20
21
22
23
24
25
A
B
C
D
E
F
G
H
I
J
CN804(WHT)
4 VA PB MODE GRY
3 MIC WHT
2 AUDIO GND
1 LINE OUT GRY
(BLK)
CN802(WHT)
TALLY 1
CAM IN 2
CAM GND 3
RETURN VIDEO 4
RETURN GND 5
CN006(WHT)
AUDIO 5V 2
VIDEO 5V 3
S/S 5V 4
REG GND 6
UNREG GND 7
VTR ON 8
UN REG 10
CN005(WHT)
BATT GND 1
V SENS 2
TAPE TOP 3
DEW 4
DC OUT 5
UNREG 6V 6
MAIN 6V 7
SYS 5V 8
S/S 5V 9
BATT 6V 10
CN801(WHT)
CAM/VTR 1
R/R REC REVIEW 2
START/STOP 3
GRY
HD-5 BOARD
CN807
12 CAM UNREG
11 POWER GND
10
9 AU 2 TALLY
8 VIDEO OUT
7 SERIAL CONT
6 AUDIO GND
5 AU I REC/PB
4 VIDEO IN
3 VIDEO GND
2 REC REVIEW
1 START/STOP
CN807
⑫⑪
⑩⑨⑧⑦
⑥⑤④③
②①
C802 (+) RED
C802 (−) ORG
HC-10
CN809(WHT)
1 2 3
4 C802 (+) RED
5 C802 (−) ORG
SC-5 BOARD
CN803(WHT)
1 SERIAL CONT
2 SERIAL CONT
CN806(BLK)
1 HEATER (+)
2 HEATER (−)
CN808(WHT)
1 CAM UNREG RED
2 UNREG RED
3 S/S 5V RED
CN805(WHT)
1 BATT 6V RED
2
3 BATT GND BLK
BP-2
CN902(WHT)
BLK BATT GND 1
2
RED BATT 6V 3
RED CAM UN REG 4
RED UNREG 5
RED S/S 5V 6
CN901
BLK BATTERY(−) 2
RED BATTERY(+) 1
FU-42 BOARD
BATTERY
JOG
H PULSE
H INSERT
DOC
RF AGC
A B C D E
K-2
OARD

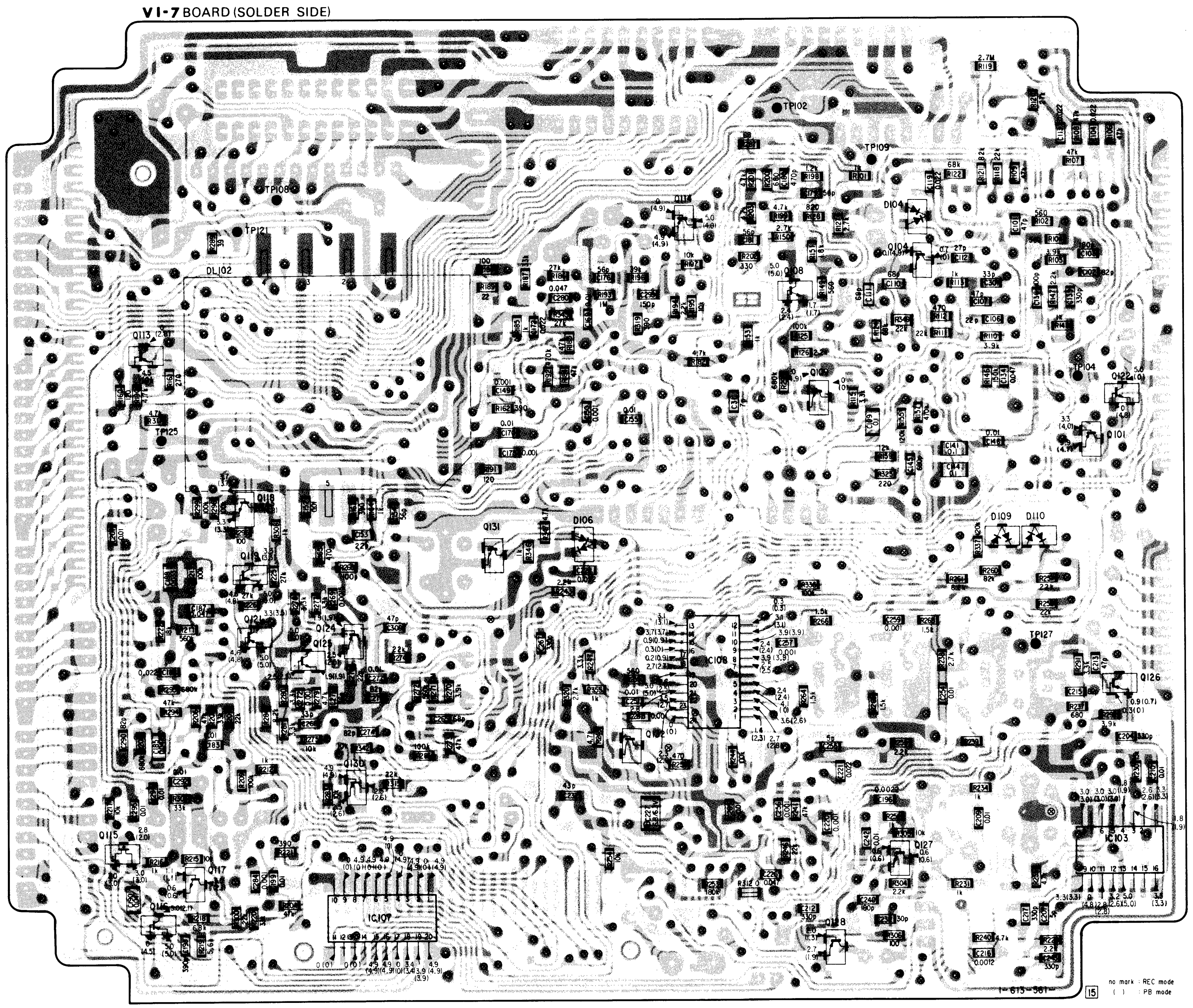
4-2. VI-7 (Y & CHROMA SIGNAL PROCESS), FE-12 (FLYING ERASE), EX-3 (TUNING EXPANDER, EQ), TK-2 (SWITCHING) PRINTED WIRING BOARDS

– Ref. No. VI-7, EX-3, TK-2 BOARDS : 1000 series, FE-12 BOARD : 8000 series –

Caution:

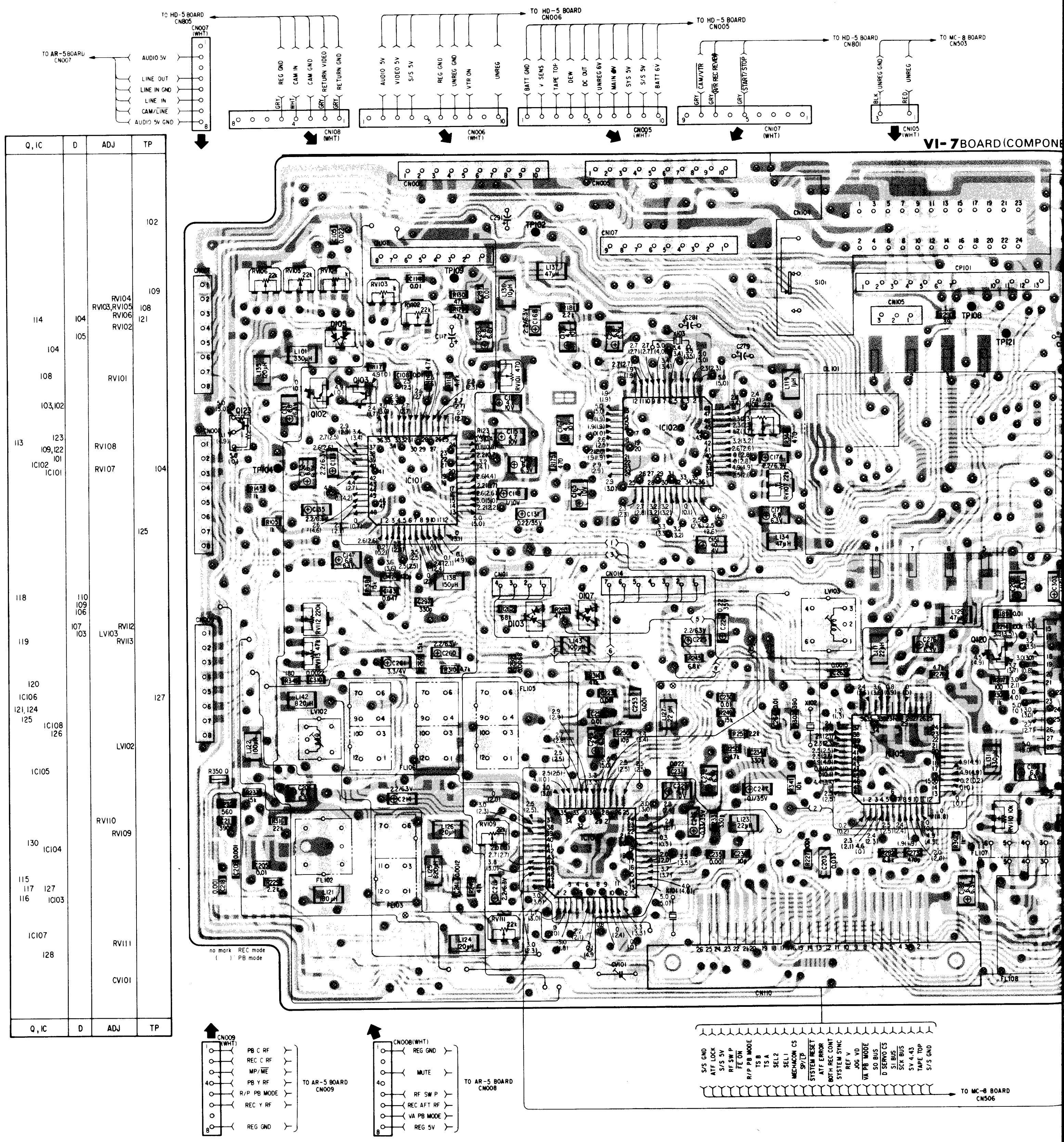
Pattern face side: (Solder Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the pattern face are indicated.

VI-7 BOARD (SOLDER SIDE)


TP108
TP121
DL102
Q113
TP125
Q118
Q119
Q131
D106
Q121
Q124
Q125
Q120
Q115
Q117
Q116
IC107
Q114
TP109
TP102
D104
Q104
Q108
Q110
Q122
Q101
IC108
Q111
D109
D110
TP127
Q126
IC103
D127
Q128
1-615-561-
15

no mark : REC mode
( ) : PB mode

Q, IC	D	ADJ	TP
			102
			109
		RV104	
		RV103, RV105	108
114	104	RV106	121
		RV102	
	105		
104			
108		RV101	
103, 102			
123			
113 109, 122		RV108	
101			
IC102			
IC101		RV107	104
			125
118	110		
	109		
	106		
	107	RV112	
	103	LV103	
119		RV113	
120			
IC106			127
121, 124			
125			
IC108			
126			
		LV102	
IC105			
		RV110	
		RV109	
130			
IC104			
115			
117 127			
116 IC103			
IC107			
		RV111	
128			
		CV101	
Q, IC	D	ADJ	TP

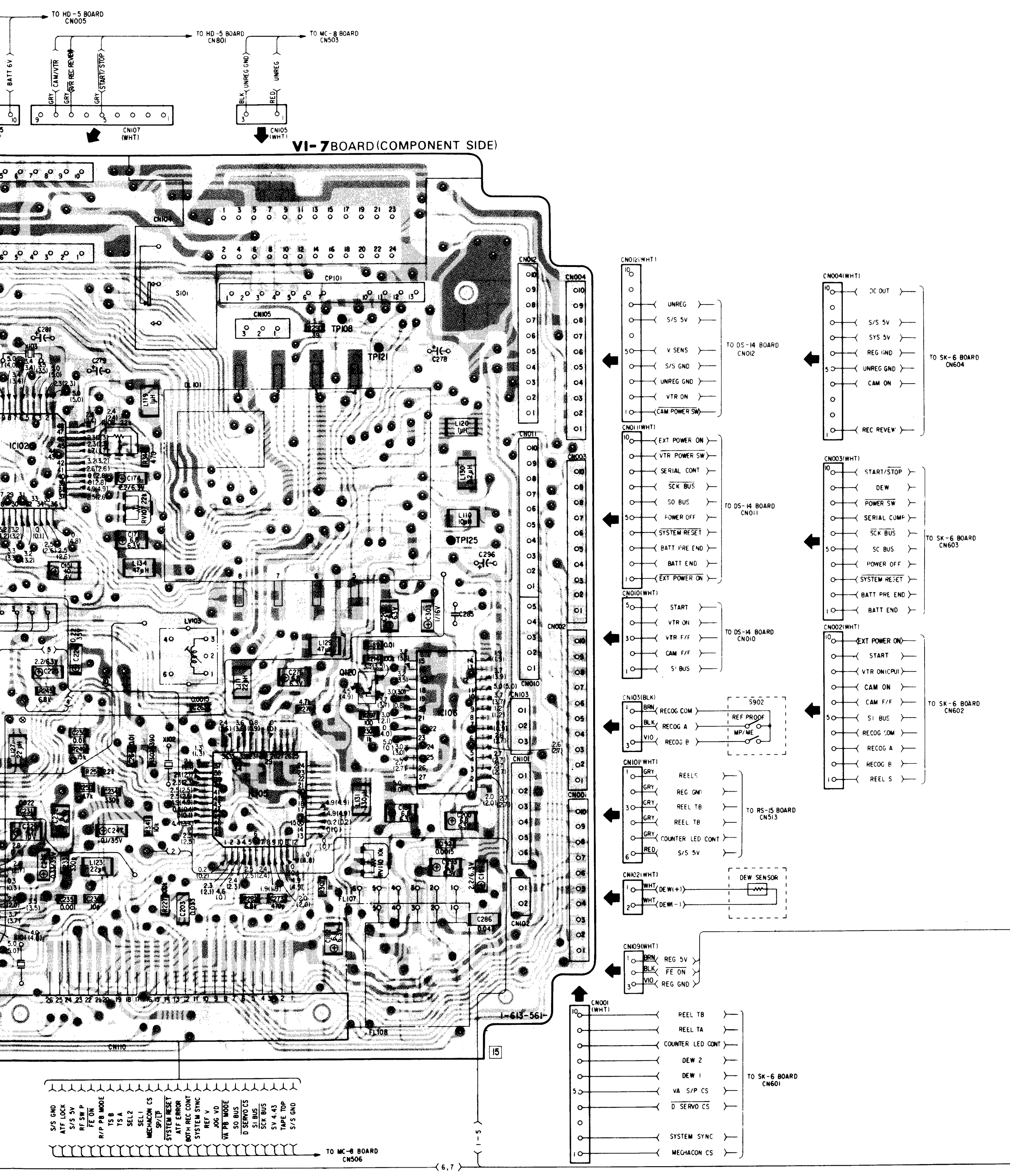

TO HD-5 BOARD CN805
CN007 (WHT)
TO AR-5 BOARD CN007
AUDIO 5V
LINE OUT
LINE IN GND
LINE IN
CAM/LINE
AUDIO 5V GND
REG GND
CAM IN
CAM GND
RETURN VIDEO
RETURN GND
GRY
WHT
CN108 (WHT)
TO HD-5 BOARD CN006
AUDIO 5V
VIDEO 5V
S/S 5V
REG GND
UNREG GND
VTR ON
UNREG
CN006 (WHT)
TO HD-5 BOARD CN005
BATT GND
V SENS
TAPE TOP
DEW
DC OUT
UNREG 6V
MAIN 6V
SYS 5V
S/S 5V
BATT 6V
CN005 (WHT)
TO HD-5 BOARD CN801
CAM/VTR
R/R REC REVEW
START/STOP
CN107 (WHT)
TO MC-8 BOARD CN503
BLK
RED
UNREG GND
UNREG
CN105 (WHT)
VI-7 BOARD (COMPONE
CN104
CP101
TP108
TP121
SI01
IC101
IC102
IC103
Q102
Q103
Q107
Q123
Q120
D103
LV101
LV102
LV103
FL101
FL103
FL105
FL108
CN110
CN009 (WHT)
PB C RF
REC C RF
MP/ME
PB Y RF
R/P PB MODE
REC Y RF
REG GND
TO AR-5 BOARD CN009
CN008 (WHT)
REG GND
MUTE
RF SW P
REC AFT RF
VA PB MODE
REG 5V
TO AR-5 BOARD CN008
S/S GND
ATF LOCK
S/S 5V
RF SW P
FE ON
R/P PB MODE
TS B
TS A
SEL 2
SEL 1
MECHACON CS
SP/LP
SYSTEM RESET
ATF ERROR
BOTH REC CONT
SYSTEM SYNC
REF V
JOG VD
VA PB MODE
SO BUS
D SERVO CS
SI BUS
SCK BUS
SV 4.43
TAPE TOP
S/S GND
TO MC-8 BOARD CN506

no mark : REC mode
( ) : PB mode

Note:

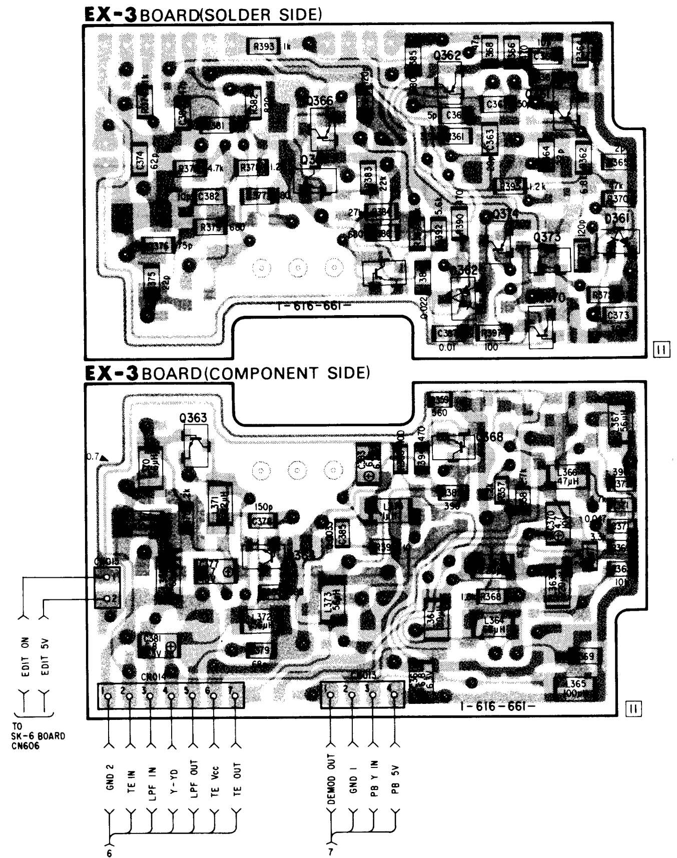
- ⊗ : Through hole.
- ▨ : pattern from the side which enables seeing.
- ░ : B+ pattern from the side which enables seeing.
- ░ : patter of the rear side.

When indicating parts by reference number, please include the board name.



VI-7 BOARD (COMPONENT SIDE)

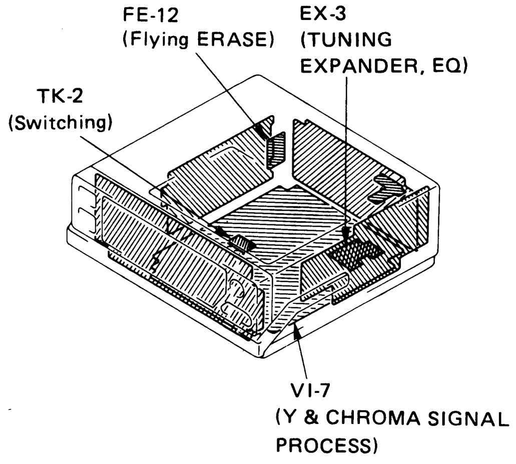
TO HD-5 BOARD CN005
TO HD-5 BOARD CN801
TO MC-8 BOARD CN503
BATT 6V
GRY CAM/VTR
GRY REC REVIEW
GRY START/STOP
BLK UNREG GND
RED UNREG
CN107 (WHT)
CN105 (WHT)
CN012 (WHT)
UNREG
S/S 5V
V SENS
S/S GND
UNREG GND
VTR ON
CAM POWER SW
TO DS-14 BOARD CN012
CN011 (WHT)
EXT POWER ON
VTR POWER SW
SERIAL CONT
SCK BUS
SO BUS
POWER OFF
SYSTEM RESET
BATT PRE END
BATT END
EXT POWER ON
TO DS-14 BOARD CN011
CN010 (WHT)
START
VTR ON
VTR F/F
CAM F/F
SI BUS
TO DS-14 BOARD CN010
CN103 (BLK)
RECOG COM
RECOG A
RECOG B
S902
REF PROOF
MP/ME
CN101 (WHT)
REELS
REG GND
REEL TB
REEL TA
COUNTER LED CONT
S/S 5V
TO RS-15 BOARD CN513
CN102 (WHT)
DEW (+1)
DEW (-1)
DEW SENSOR
CN109 (WHT)
REG 5V
FE ON
REG GND
CN004 (WHT)
DC OUT
S/S 5V
SYS 5V
REG GND
UNREG GND
CAM ON
REC REVIEW
TO SK-6 BOARD CN604
CN003 (WHT)
START/STOP
DEW
POWER SW
SERIAL COMP
SCK BUS
SC BUS
POWER OFF
SYSTEM RESET
BATT PRE END
BATT END
TO SK-6 BOARD CN603
CN002 (WHT)
EXT POWER ON
START
VTR ON (CPU)
CAM ON
CAM F/F
SI BUS
RECOG COM
RECOG A
RECOG B
REEL S
TO SK-6 BOARD CN602
CN001 (WHT)
REEL TB
REEL TA
COUNTER LED CONT
DEW 2
DEW 1
VA S/P CS
D SERVO CS
SYSTEM SYNC
MECHACON CS
TO SK-6 BOARD CN601
S/S GND
ATF LOCK
S/S 5V
R F SW P
FE ON
R/P PB MODE
TS B
TS A
SEL 1
SEL 2
MECHACON CS
SP/LP
SYSTEM RESET
ATF ERROR
BOTH REC CONT
SYSTEM SYNC
REF V
JOG VD
VA PB MODE
SO BUS
SI BUS
SCK BUS
5V 4.43
TAPE TOP
S/S GND
TO MC-8 BOARD CN506
CN110
1-613-561-
15
S101
CP101
IC102
IC103
IC105
LV101
TP106
TP121
TP125
C278
C296
(6,7)
(1-5)



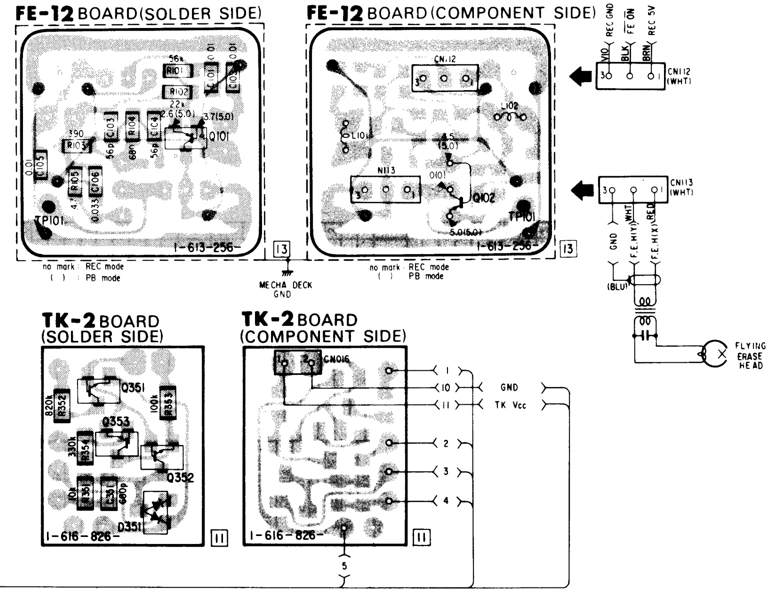
EX-3 BOARD (SOLDER SIDE)

EX-3 BOARD (COMPONENT SIDE)

1-616-661-
11
Q361
Q362
Q363
Q366
Q368
EDIT ON
EDIT 5V
TO SK-6 BOARD CN606
CN014
CN015
GND 2
TE IN
LPF IN
Y-YD
LPF OUT
TE Vcc
TE OUT
DEMOD OUT
GND 1
PB Y IN
PB 5V
6
7



FE-12
(Flying ERASE)
EX-3
(TUNING
EXPANDER, EQ)
TK-2
(Switching)
VI-7
(Y & CHROMA SIGNAL
PROCESS)



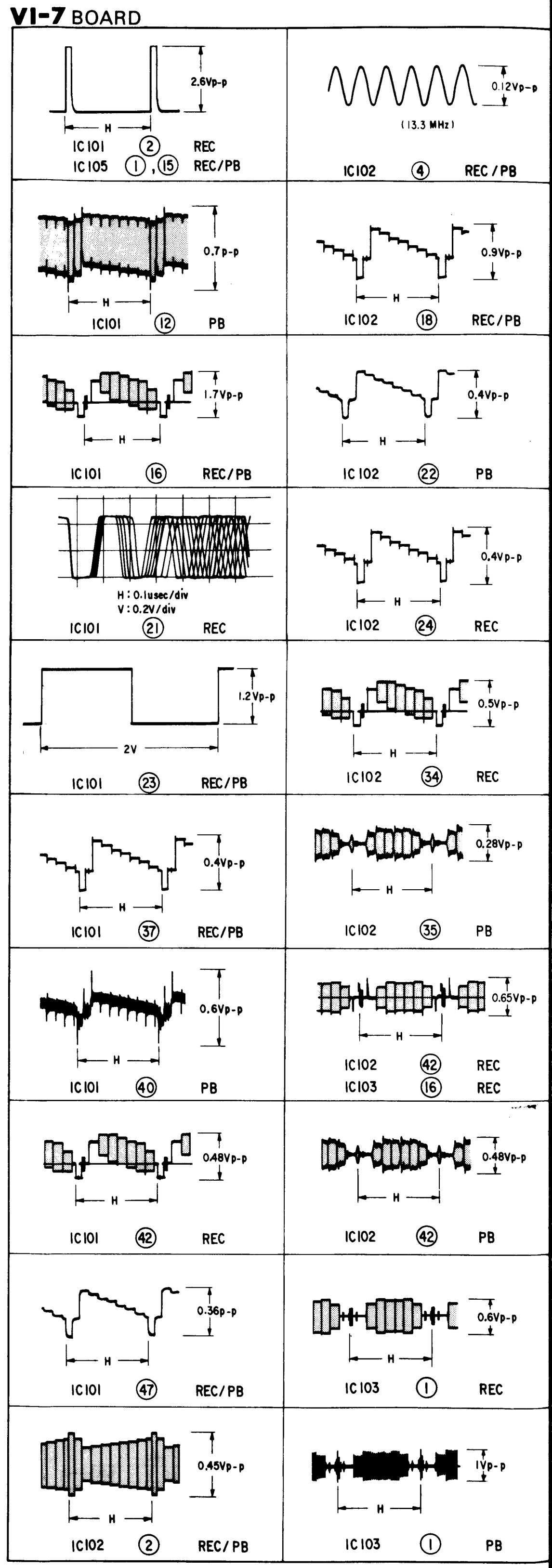
FE-12 BOARD (SOLDER SIDE)

FE-12 BOARD (COMPONENT SIDE)

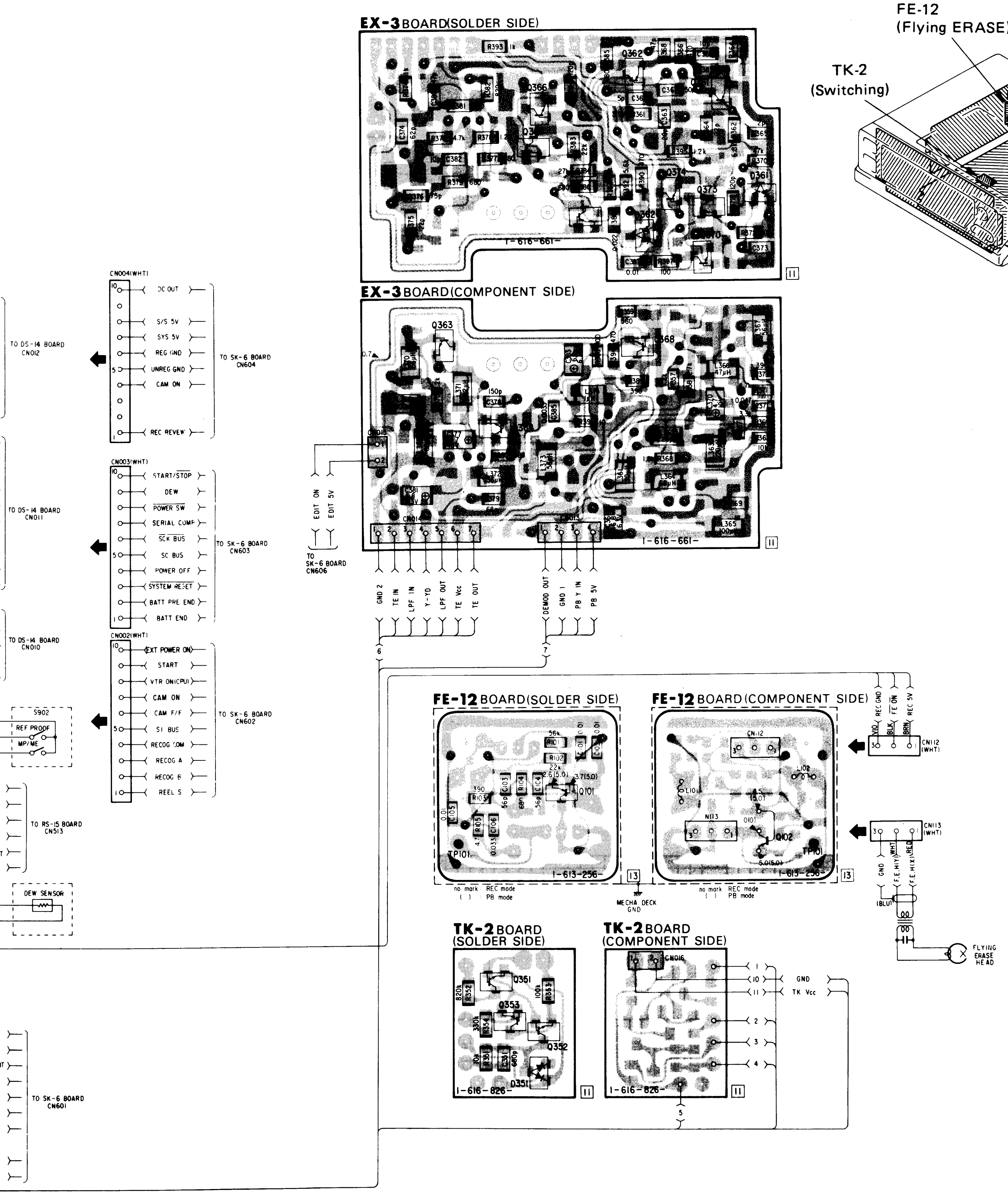
TK-2 BOARD (SOLDER SIDE)

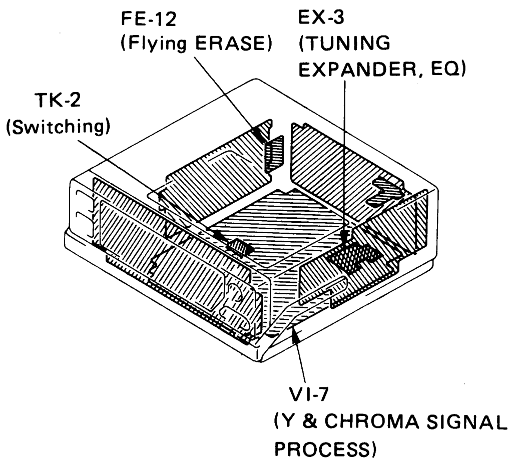
TK-2 BOARD (COMPONENT SIDE)

1-613-256-
13
TP101
Q101
Q102
no mark REC mode
( ) PB mode
MECHA DECK GND
CN112 (WHT)
REC GND
BLK
FE ON
REC 5V
CN113 (WHT)
GND
FE HIY
FE HIX
(BLU)
FLYING ERASE HEAD
Q351
Q352
Q353
CN016
1-616-826-
11
GND
TK Vcc
5

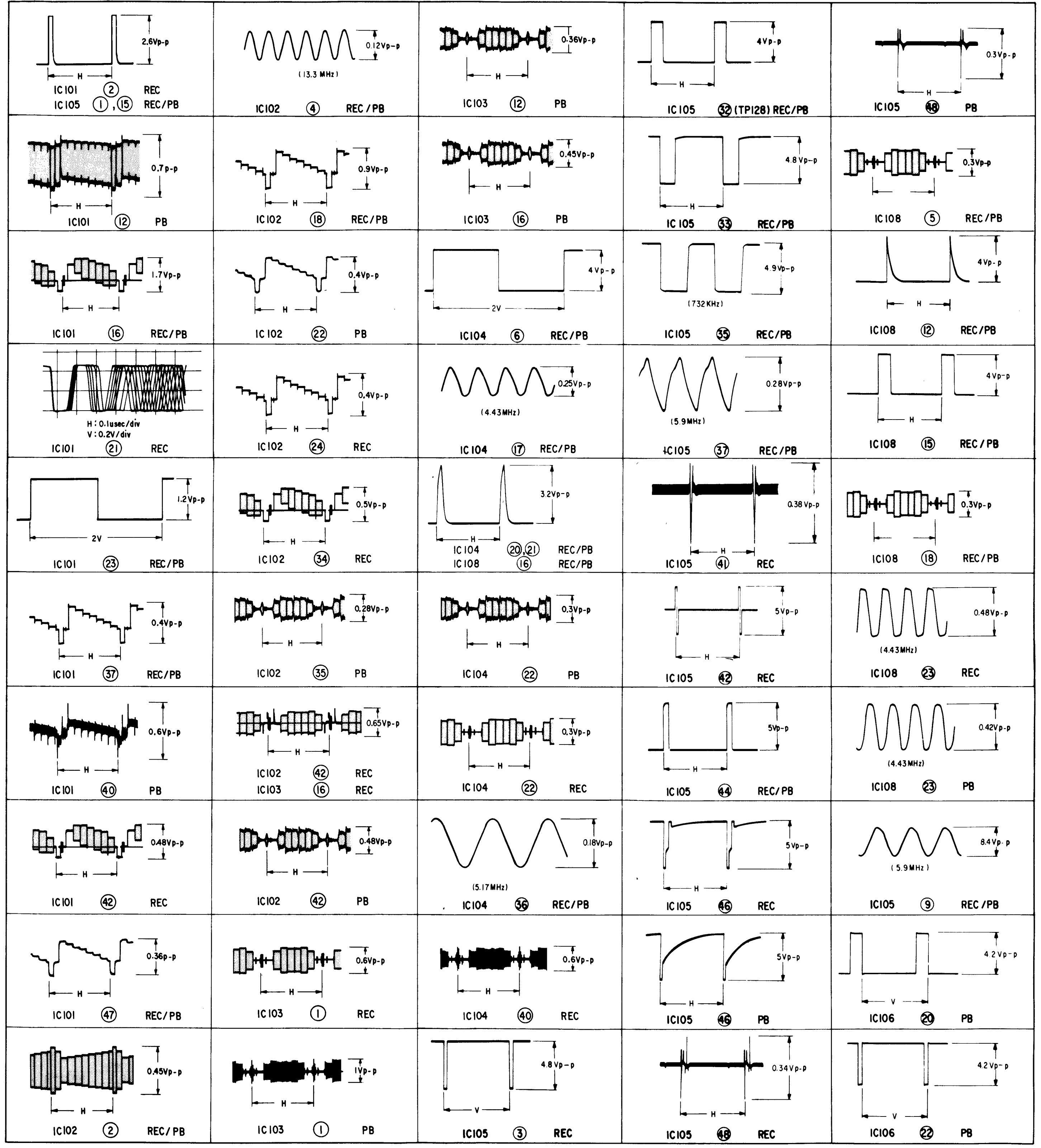


VI-7 BOARD


EX-3 BOARD(SOLDER SIDE)
1-616-661-
11
EX-3 BOARD(COMPONENT SIDE)
1-616-661-
11
CN004(WHT)
DC OUT
S/S 5V
SYS 5V
REG GND
UNREG GND
CAM ON
REC REVEW
TO DS-14 BOARD CN012
TO SK-6 BOARD CN604
CN003(WHT)
START/STOP
DEW
POWER SW
SERIAL COMP
SCK BUS
SC BUS
POWER OFF
SYSTEM RESET
BATT PRE END
BATT END
TO DS-14 BOARD CN011
TO SK-6 BOARD CN603
CN002(WHT)
EXT POWER ON
START
VTR ON(CPU)
CAM ON
CAM F/F
SI BUS
RECOG COM
RECOG A
RECOG B
REEL S
TO DS-14 BOARD CN010
TO SK-6 BOARD CN602
S902
REF PROOF
MP/ME
TO RS-15 BOARD CN513
DEW SENSOR
TO SK-6 BOARD CN601
EDIT ON
EDIT 5V
TO SK-6 BOARD CN606
CN014
GND 2
TE IN
LPF IN
Y-YD
LPF OUT
TE Vcc
TE OUT
CN015
DEMOD OUT
GND 1
PB Y IN
PB 5V
6
7
FE-12 BOARD(SOLDER SIDE)
1-613-256-
13
no mark : REC mode
( ) : PB mode
MECHA DECK GND
FE-12 BOARD(COMPONENT SIDE)
1-613-256-
13
no mark REC mode
( ) PB mode
REC GND
FE ON
REC 5V
VIO
BLK
BRN
CN112 (WHT)
CN113 (WHT)
GND
F.E.H(Y)
F.E.H(X)
WHT
RED
(BLU)
FLYING ERASE HEAD
TK-2 BOARD (SOLDER SIDE)
1-616-826-
11
TK-2 BOARD (COMPONENT SIDE)
CN016
1-616-826-
11
GND
TK Vcc
5


FE-12
(Flying ERASE)
EX-3
(TUNING EXPANDER, EQ)
TK-2
(Switching)
VI-7
(Y & CHROMA SIGNAL PROCESS)

VI-7 BOARD


2.6Vp-p
H
IC101 ② REC
IC105 ①,⑮ REC/PB
0.12Vp-p
(13.3 MHz)
IC102 ④ REC/PB
0.36Vp-p
H
IC103 ⑫ PB
4Vp-p
H
IC105 ㉜ (TP128) REC/PB
0.3Vp-p
H
IC105 ㊽ PB
0.7p-p
H
IC101 ⑫ PB
0.9Vp-p
H
IC102 ⑱ REC/PB
0.45Vp-p
H
IC103 ⑯ PB
4.8Vp-p
H
IC105 ㉝ REC/PB
0.3Vp-p
IC108 ⑤ REC/PB
1.7Vp-p
H
IC101 ⑯ REC/PB
0.4Vp-p
H
IC102 ㉒ PB
4Vp-p
2V
IC104 ⑥ REC/PB
4.9Vp-p
(732KHz)
IC105 ㉟ REC/PB
4Vp-p
H
IC108 ⑫ REC/PB
H: 0.1usec/div
V: 0.2V/div
IC101 ㉑ REC
0.4Vp-p
H
IC102 ㉔ REC
0.25Vp-p
(4.43MHz)
IC104 ⑰ REC/PB
0.28Vp-p
(5.9MHz)
IC105 ㊲ REC/PB
4Vp-p
H
IC108 ⑮ REC/PB
1.2Vp-p
2V
IC101 ㉓ REC/PB
0.5Vp-p
H
IC102 ㉞ REC
3.2Vp-p
H
IC104 ⑳,㉑ REC/PB
IC108 ⑯ REC/PB
0.38Vp-p
H
IC105 ㊶ REC
0.3Vp-p
IC108 ⑱ REC/PB
0.4Vp-p
H
IC101 ㊲ REC/PB
0.28Vp-p
H
IC102 ㉟ PB
0.3Vp-p
H
IC104 ㉒ PB
5Vp-p
H
IC105 ㊷ REC
0.48Vp-p
(4.43MHz)
IC108 ㉓ REC
0.6Vp-p
H
IC101 ㊵ PB
0.65Vp-p
H
IC102 ㊷ REC
IC103 ⑯ REC
0.3Vp-p
H
IC104 ㉒ REC
5Vp-p
H
IC105 ㊹ REC/PB
0.42Vp-p
(4.43MHz)
IC108 ㉓ PB
0.48Vp-p
H
IC101 ㊷ REC
0.48Vp-p
H
IC102 ㊷ PB
0.18Vp-p
(5.17MHz)
IC104 ㊱ REC/PB
5Vp-p
H
IC105 ㊻ REC
8.4Vp-p
(5.9MHz)
IC105 ⑨ REC/PB
0.36p-p
H
IC101 ㊼ REC/PB
0.6Vp-p
H
IC103 ① REC
0.6Vp-p
H
IC104 ㊵ REC
5Vp-p
H
IC105 ㊻ PB
4.2Vp-p
V
IC106 ⑳ PB
0.45Vp-p
H
IC102 ② REC/PB
1Vp-p
H
IC103 ① PB
4.8Vp-p
V
IC105 ③ REC
0.34Vp-p
H
IC105 ㊽ REC
4.2Vp-p
V
IC106 ㉒ PB

VI-7 (Y & CHROMA SIGNAL PROCESS), FE-12 (FLYING ERASE), EX-3 (TUNING EXPANDER, EQ), TK-2 (SWITCHING) SCHEMATIC DIAGRAM

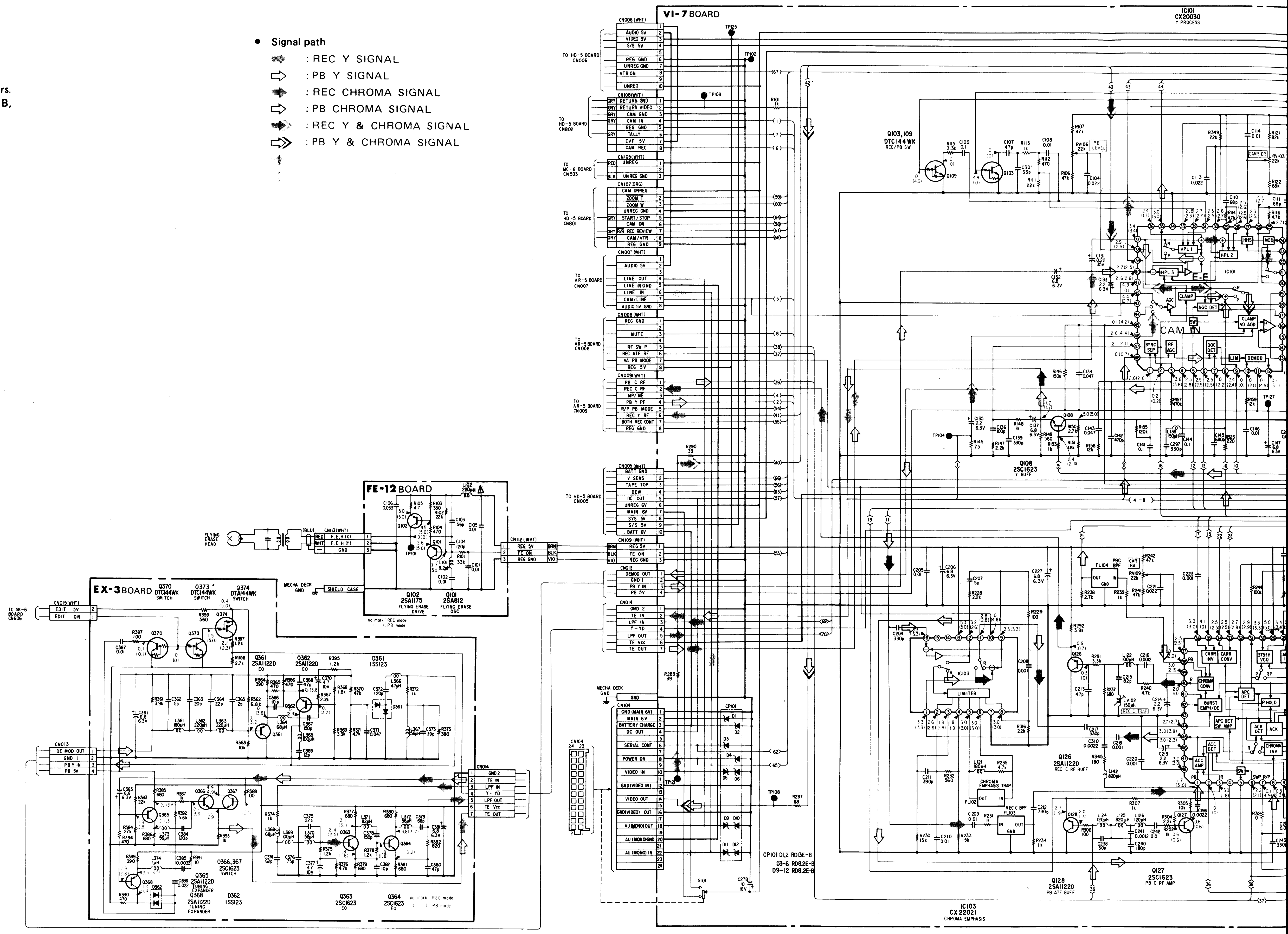
– Ref. No. VI-7, EX-3, TK-2 BOARDS : 1000 series, FE-12 BOARD : 8000 series –

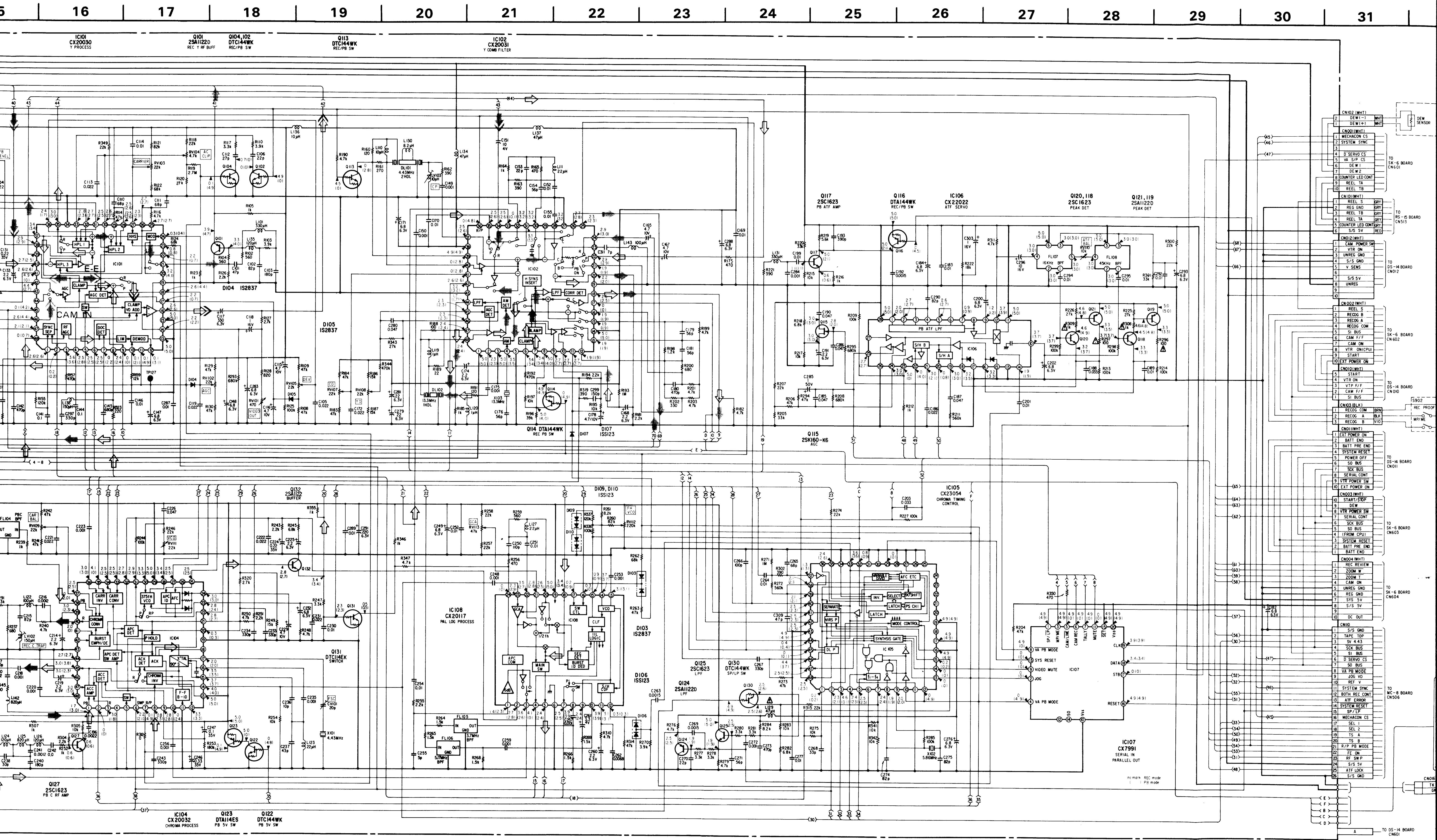
Note:

- All resistors are in ohms, 1/10W unless otherwise noted.
- All capacitors are in μF (p:pF) unless otherwise noted. 50V or less are not indicated except for electrolytic capacitors.
- All variable and semi fixed resistors have characteristic curve B, unless otherwise noted.
- ▭ : panel designation.
- ▭ : Nonflammable resistor
- ——— : B+ bus.
- ▭ : adjustment for repair.
- Voltage and waveform measuring conditions: The reference value against ground when recieving the video signal from the pattern generator through AC-V8.
- The voltage value is measured using DC digital multimeter (impedance 10M-ohm or more).

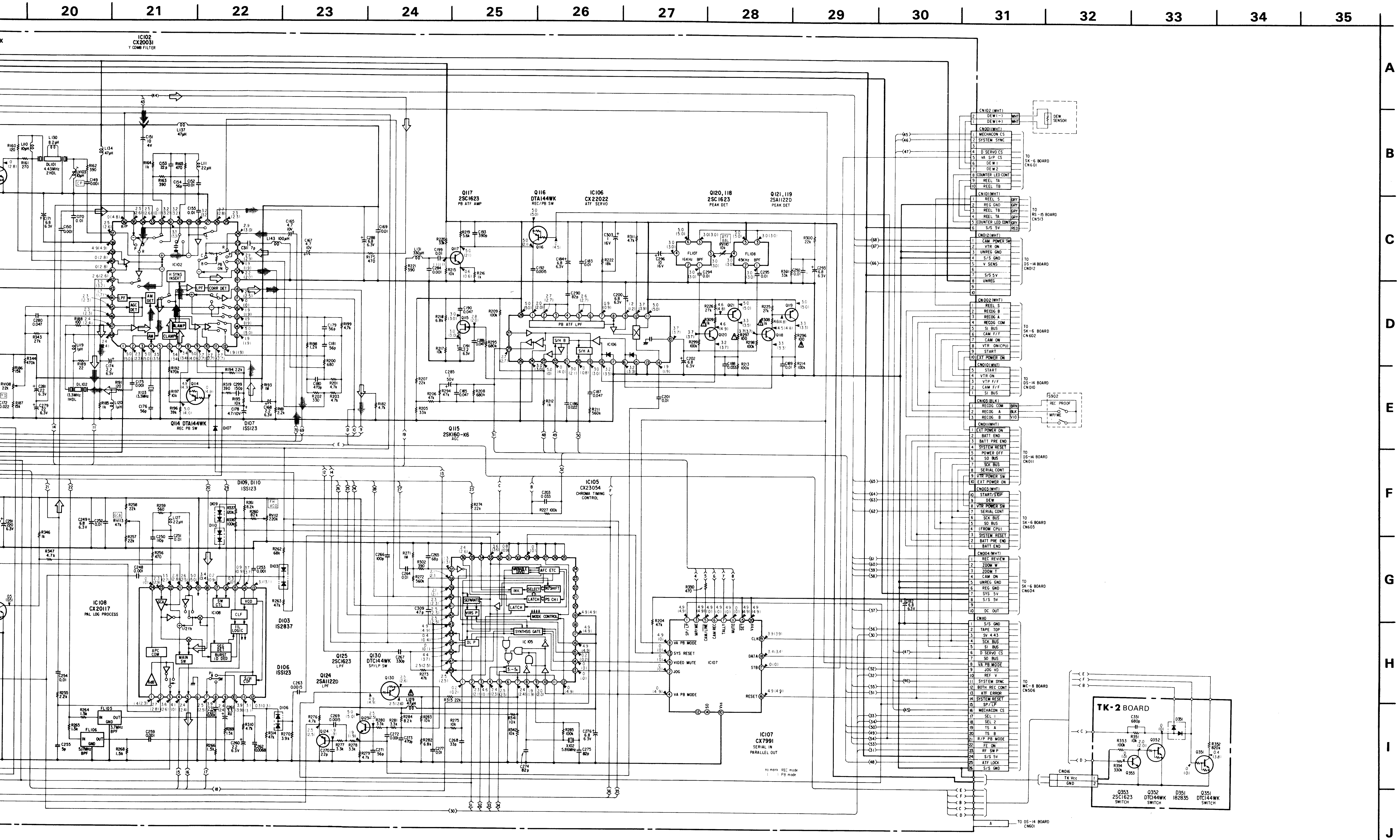
When indicating parts by reference number, please include the board name.

- Signal path
  - ➡ : REC Y SIGNAL
  - ⇨ : PB Y SIGNAL
  - ➡ : REC CHROMA SIGNAL
  - ⇨ : PB CHROMA SIGNAL
  - ➡ : REC Y & CHROMA SIGNAL
  - ⇨ : PB Y & CHROMA SIGNAL


VI-7 BOARD
IC101 CX20030 Y PROCESS
IC103 CX22021 CHROMA EMPHASIS
FE-12 BOARD
Q102 2SA1175 FLYING ERASE DRIVE
Q101 2SA812 FLYING ERASE OSC
FLYING ERASE HEAD
MECHA DECK GND
SHIELD CASE
EX-3 BOARD
Q370 DTC144WK SWITCH
Q373 DTC144WK SWITCH
Q374 DTA144WK SWITCH
Q361 2SA1122D EQ
Q362 2SA1122D EQ
D361 1SS123
Q363 2SC1623 EQ
Q364 2SC1623 EQ
Q365 2SA1122D TUNING EXPANDER
Q366,367 2SC1623 SWITCH
Q368 2SA1122D TUNING EXPANDER
D362 1SS123
Q103,109 DTC144WK REC/PB SW
Q108 2SC1623 Y BUFF
Q126 2SA1122D REC C RF BUFF
Q127 2SC1623 PB C RF AMP
Q128 2SA1122D PB ATF BUFF
CP101 D1,2 RD13E-B
D3-6 RD8.2E-B
D9-12 RD8.2E-B
TO HD-5 BOARD CN006
TO HD-5 BOARD CN802
TO MC-8 BOARD CN503
TO HD-5 BOARD CN801
TO AR-5 BOARD CN007
TO AR-5 BOARD CN008
TO AR-5 BOARD CN009
TO HD-5 BOARD CN005
TO SK-6 BOARD CN606
no mark : REC mode
( ) : PB mode
LIMITER
CHROMA EMPHASIS TRAP
CAM IN
E-E



IC101 CX20030 Y PROCESS
Q101 2SA1122D REC Y RF BUFF
Q104,102 DTC144WK REC/PB SW
Q113 DTC144WK REC/PB SW
IC102 CX20031 Y COMB FILTER
Q117 2SC1623 PB ATF AMP
Q116 DTA144WK REC/PB SW
IC106 CX22022 ATF SERVO
Q120,118 2SC1623 PEAK DET
Q121,119 2SA1122D PEAK DET
D104 1S2837
D105 1S2837
Q114 DTA144WK REC PB SW
D107 1SS123
Q115 2SK160-K6 AGC
DL101 4.43MHz 2HDL
DL102 13.3MHz 1HDL
FL107 15KHz BPF
FL108 45KHz BPF
Q132 2SA1122 BUFFER
D109, D110 1SS123
IC105 CX23054 CHROMA TIMING CONTROL
IC108 CX20117 PAL LOG PROCESS
D103 1S2837
D106 1SS123
Q131 DTC114EK SWITCH
Q125 2SC1623 LPF
Q124 2SA1122D LPF
Q130 DTC144WK SP/LP SW
IC107 CX7991 SERIAL IN PARALLEL OUT
Q127 2SC1623 PB C RF AMP
IC104 CX20032 CHROMA PROCESS
Q123 DTA114ES PB 5V SW
Q122 DTC144WK PB 5V SW
FL105 3.7MHz BPF
FL106 5.7MHz BPF
X101 4.43MHz
X102 5.86MHz
X103 13.3MHz
CN102 (WHT)
DEW (-)
DEW (+)
DEW SENSOR
CN001 (WHT)
MECHACON CS
SYSTEM SYNC
D SERVO CS
VA S/P CS
DEW 1
DEW 2
COUNTER LED CONT
REEL TA
REEL TB
TO SK-6 BOARD CN601
CN101 (WHT)
REEL S
REG GND
REEL TB
REEL TA
COUNTER LED CONT
S/S 5V
TO RS-15 BOARD CN513
CN012 (WHT)
CAM POWER SW
VTR ON
UNREG GND
S/S GND
V SENS
S/S 5V
UNREG
TO DS-14 BOARD CN012
CN002 (WHT)
REEL S
RECOG B
RECOG A
RECOG COM
S1 BUS
CAM F/F
CAM ON
VTR ON (CPU)
START
EXT POWER ON
TO SK-6 BOARD CN602
CN010 (WHT)
START
VTR ON
VTR F/F
CAM F/F
S1 BUS
TO DS-14 BOARD CN010
S902 REC PROOF
CN003 (BLK)
RECOG COM
RECOG A
RECOG B
CN011 (WHT)
EXT POWER ON
BATT END
BATT PRE END
SYSTEM RESET
POWER OFF
SO BUS
SCK BUS
SERIAL CONT
VTR POWER SW
EXT POWER ON
TO DS-14 BOARD CN011
CN603 (WHT)
START/STOP
DEW
VTR POWER SW
SERIAL CONT
SCK BUS
SO BUS
(FROM CPU)
SYSTEM RESET
BATT PRE END
BATT END
TO SK-6 BOARD CN603
CN004 (WHT)
REC REVIEW
ZOOM W
ZOOM T
CAM ON
UNREG GND
REG GND
SYS 5V
S/S 5V
DC OUT
TO SK-6 BOARD CN604
CN110
S/S GND
TAPE TOP
SV 4.43
SCK BUS
S1 BUS
D SERVO CS
SO BUS
VA PB MODE
JOG VD
REF V
SYSTEM SYNC
BOTH REC CONT
ATF ERROR
SYSTEM RESET
SP/LP
MECHACON CS
SEL 1
SEL 2
TS A
TS B
R/P PB MODE
FE ON
RF SWP
S/S 5V
ATF LOCK
S/S GND
TO MC-8 BOARD CN506
TO DS-14 BOARD CN601
no mark : REC mode
( ) : PB mode
VA PB MODE
SYS RESET
VIDEO MUTE
JOG
CLK
DATA
STB
RESET
CAM IN
E-E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A
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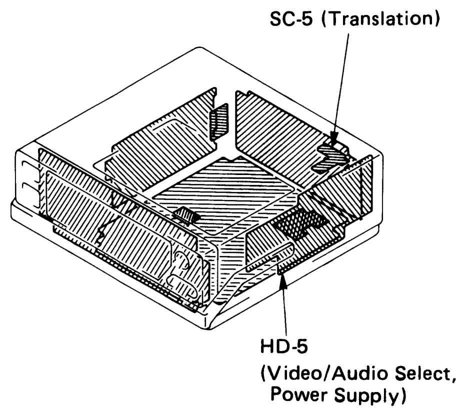
F
G
H
I
J
IC102
CX20031
Y COMB FILTER
Q117
2SC1623
PB ATF AMP
Q116
DTA144WK
REC/PB SW
IC106
CX22022
ATF SERVO
Q120, 118
2SC1623
PEAK DET
Q121, 119
2SA1122D
PEAK DET
PB ATF LPF
S/H B
S/H A
FL107 16kHz BPF
FL108 45kHz BPF
DL101 4.43MHz 2HDL
DL102 13.3MHz 1HDL
LPF
AGC DET
AM DET
CLAMP
H SYNC INSERT
CORR DET
Q114 DTA144WK
REC PB SW
D107
1SS123
Q115
2SK160-K6
AGC
D109, D110
1SS123
IC105
CX23054
CHROMA TIMING CONTROL
IC108
CX20117
PAL LOG PROCESS
SW CTL
VCO
CLF
1/L LOGIC
APC COM
SEG DET
BURST 10 DED
MAIN SW
S/H COP
D103
1S2837
D106
1SS123
Q125
2SC1623
LPF
Q130
DTC144WK
SP/LP SW
Q124
2SA1122D
LPF
FL105 3.7MHz BPF
FL106 5.7MHz BPF
X102 5.86MHz
X103 13.3MHz
SEPARATE
VIRS P
DL P
INV.
SELECT
LATCH
AFC ETC
CAPSHIFT
PS CH1
MODE CONTROL
SYNTHESIS GATE
IC 105
IC107
CX7991
SERIAL IN
PARALLEL OUT
VA PB MODE
SYS RESET
VIDEO MUTE
JOG
CLK
DATA
STB
RESET
no mark : REC mode
( ) : PB mode
CN102 (WHT)
2 DEW(−) WHT
1 DEW(+) WHT
DEW SENSOR
CN001 (WHT)
1 MECHACON CS
2 SYSTEM SYNC
3
4 D SERVO CS
5 VA S/P CS
6 DEW 1
7 DEW 2
8 COUNTER LED CONT
9 REEL TA
10 REEL TB
TO SK-6 BOARD CN601
CN101 (WHT)
1 REEL S GRY
2 REG GND GRY
3 REEL TB GRY
4 REEL TA GRY
5 COUNTER LED CONT GRY
6 S/S 5V RED
TO RS-15 BOARD CN513
CN012 (WHT)
1 CAM POWER SW
2 VTR ON
3 UNREG GND
4 S/S GND
5 V SENS
6
7 S/S 5V
8 UNREG
9
10
TO DS-14 BOARD CN012
CN002 (WHT)
1 REEL S
2 RECOG B
3 RECOG A
4 RECOG COM
5 SI BUS
6 CAM F/F
7 CAM ON
8 VTR ON(CPU)
9 START
10 EXT POWER ON
TO SK-6 BOARD CN602
CN010 (WHT)
5 START
4 VTR ON
3 VTP F/F
2 CAM F/F
1 SI BUS
TO DS-14 BOARD CN010
CN103 (BLK)
1 RECOG COM BRN
2 RECOG A BLK
3 RECOG B VIO
S902
REC PROOF
MP/ME
CN011 (WHT)
1 EXT POWER ON
2 BATT END
3 BATT PRE END
4 SYSTEM RESET
5 POWER OFF
6 SO BUS
7 SCK BUS
8 SERIAL CONT
9 VTR POWER SW
10 EXT POWER ON
TO DS-14 BOARD CN011
CN003 (WHT)
10 START/STOP
9 DEW
8 VTR POWER SW
7 SERIAL CONT
6 SCK BUS
5 SO BUS
4 (FROM CPU)
3 SYSTEM RESET
2 BATT PRE END
1 BATT END
TO SK-6 BOARD CN603
CN004 (WHT)
1 REC REVIEW
2 ZOOM W
3 ZOOM T
4 CAM ON
5 UNREG GND
6 REG GND
7 SYS 5V
8 S/S 5V
9
10 DC OUT
TO SK-6 BOARD CN604
CN110
1 S/S GND
2 TAPE TOP
3 SV 4.43
4 SCK BUS
5 SI BUS
6 D SERVO CS
7 SO BUS
8 VA PB MODE
9 JOG VD
10 REF V
11 SYSTEM SYNC
12 BOTH REC CONT
13 ATF ERROR
14 SYSTEM RESET
15 SP/LP
16 MECHACON CS
17 SEL 1
18 SEL 2
19 TS A
20 TS B
21 R/P PB MODE
22 FE ON
23 RF SW P
24 S/S 5V
25 ATF LOCK
26 S/S GND
TO MC-8 BOARD CN506
TO DS-14 BOARD CN601
CN016
1 TK Vcc
2 GND
TK-2 BOARD
C351 680p
R353 100k
R351 10k
R354 330k
R352 820k
Q353
2SC1623
SWITCH
Q352
DTC144WK
SWITCH
D351
1S2835
Q351
DTC144WK
SWITCH

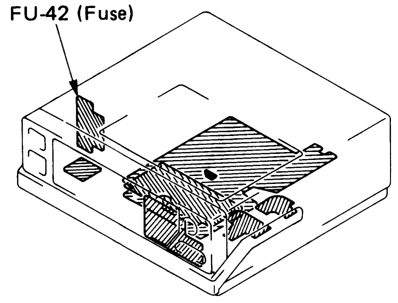
HD-5 (VIDEO/AUDIO SELECT, POWER SUPPLY), FU-42 (FUSE),

– Ref. No. HD-5, FU-42, SC-5 BOARDS : 2000 series –

1 2 3 4

A B C D E F G H I J


SC-5 (Translation)
HD-5
(Video/Audio Select, Power Supply)



Caution:	
Pattern face side: (Solder Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the pattern face are indicated.

Note:

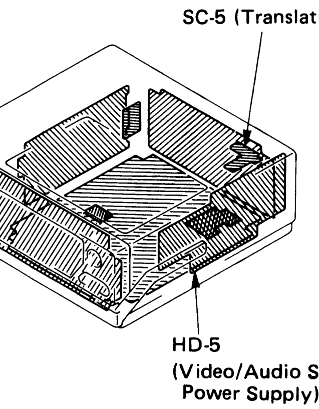
- ⊗ : Through hole.
- ▨ : pattern from the side which enables seeing.
- ▨ : B+ pattern from the side which enables seeing.
- ▨ : patter of the rear side.

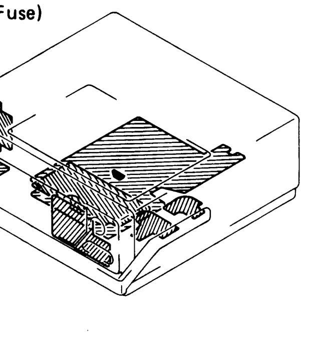
When indicating parts by reference number, please include the board name.

UDIO SELECT, POWER SUPPLY), FU-42 (FUSE), SC-5 (TRANSLATION) PRINTED WIRING BOARDS

J-42, SC-5 BOARDS : 2000 series –

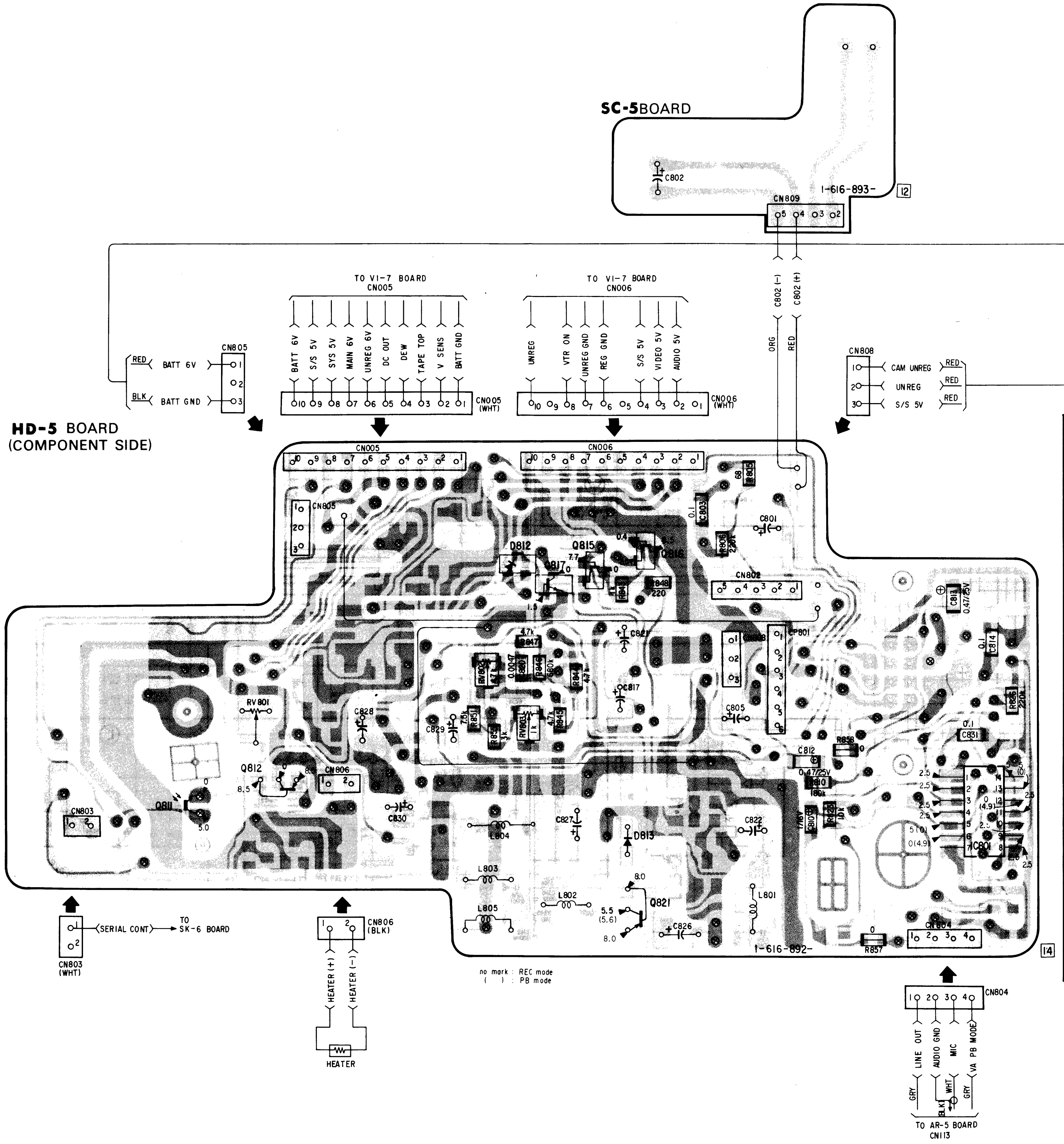
2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18


SC-5 (Translation)
HD-5
(Video/Audio Select,
Power Supply)



ce side: Parts on the pattern face side seen from
de) the pattern face are indicated.

side: Parts on the parts face side seen from
nt Side) the pattern face are indicated.


SC-5BOARD
C802
1-616-893-
12
CN809
5 4 3 2
C802 (–)
C802 (+)
ORG
RED
TO VI-7 BOARD
CN005
BATT 6V
S/S 5V
SYS 5V
MAIN 6V
UNREG 6V
DC OUT
DEW
TAPE TOP
V SENS
BATT GND
CN005 (WHT)
TO VI-7 BOARD
CN006
UNREG
VTR ON
UNREG GND
REG GND
S/S 5V
VIDEO 5V
AUDIO 5V
CN006 (WHT)
CN805
RED BATT 6V
BLK BATT GND
CN808
CAM UNREG RED
UNREG RED
S/S 5V RED
HD-5 BOARD
(COMPONENT SIDE)
D812
Q815
Q817
Q816
C801
CN802
CP801
RV801
C828
C829
C817
C821
C805
C812
C831
Q812
CN806
Q811
C830
CN803
C827
D813
C822
IC801
L804
L803
L805
L802
Q821
C826
L801
R857
CN804
1-616-892-
14
CN803 (WHT)
SERIAL CONT
TO SK-6 BOARD
CN806 (BLK)
HEATER (+)
HEATER (–)
HEATER
no mark : REC mode
( ) : PB mode
CN804
LINE OUT
AUDIO GND
MIC
VA PB MODE
GRY
BLK
WHT
GRY
TO AR-5 BOARD
CN113

rough hole.

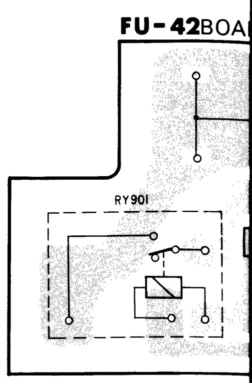
attern from the side which enables seeing.

3+ pattern from the side which enables seeing.

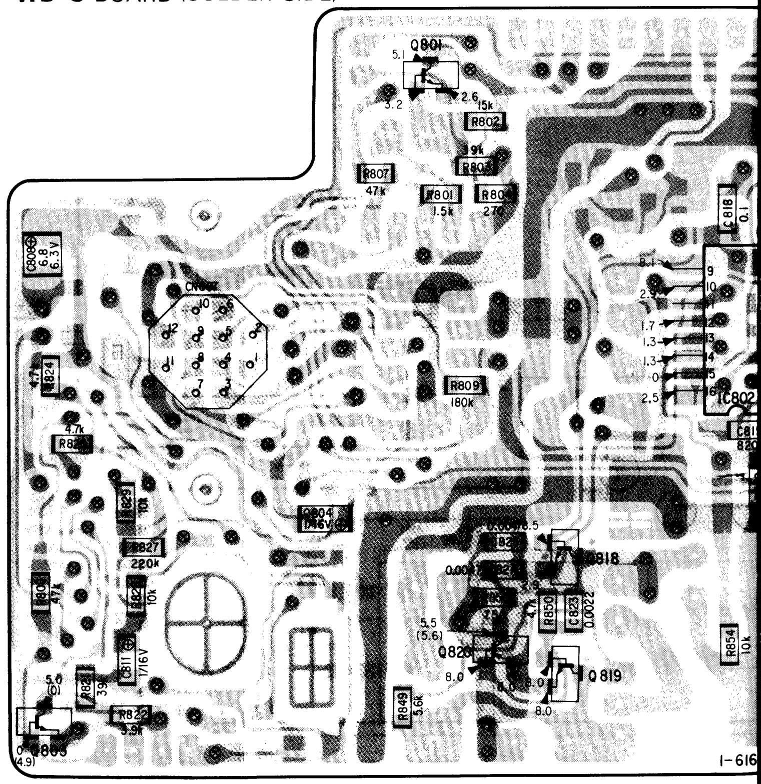
atter of the rear side.

icating parts by refer-
mber, please include
name.

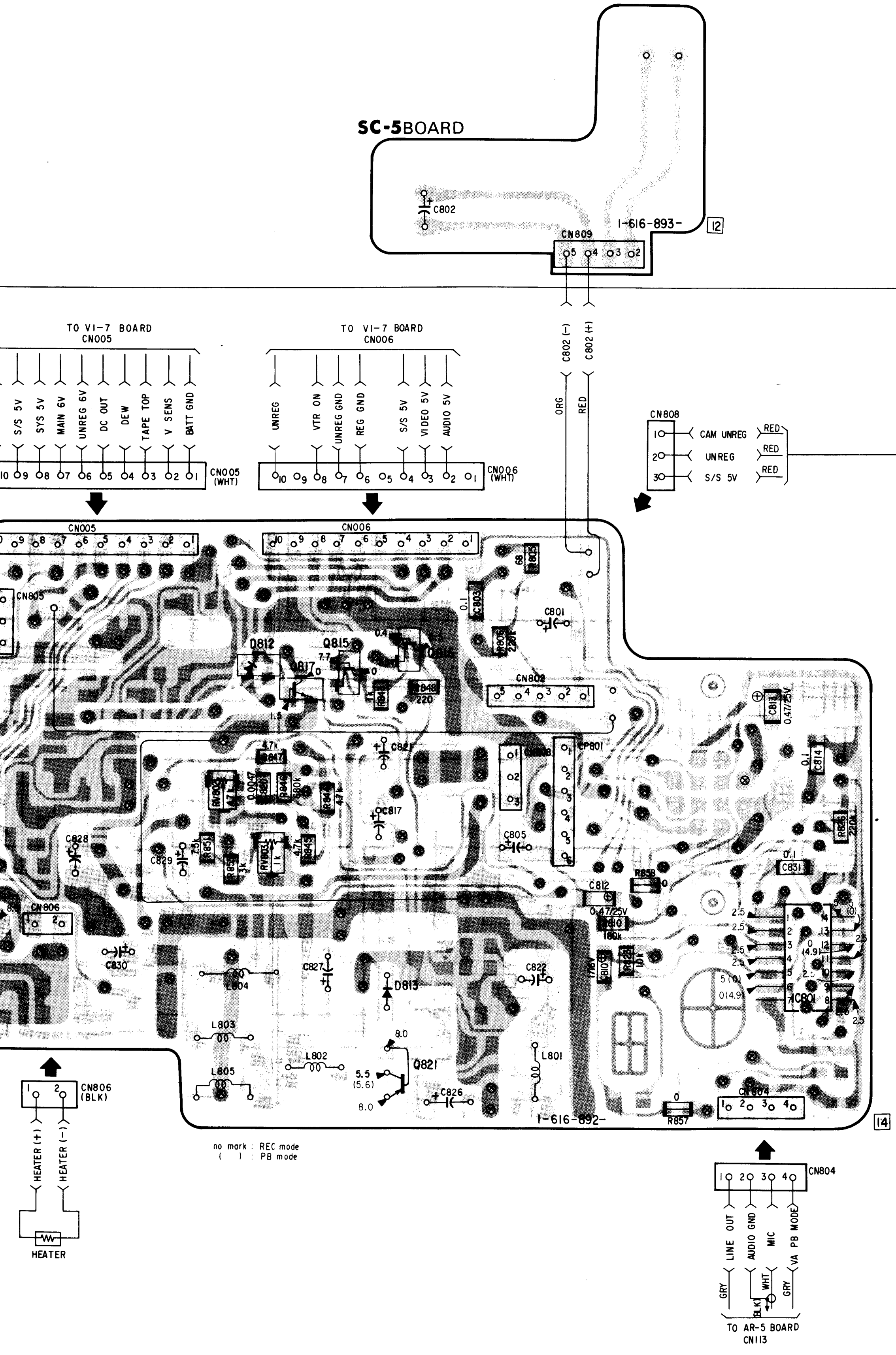
Q , IC	D	RV
801		
	810	
816		
815 807	812	
817		
IC803		
IC802		802
		803
	801	
		801
IC801		
812 818		
811		
	813	
814 813		
820,	811	
819		
821		
803		
Q , IC	D	RV


FU-42BOA
RY901

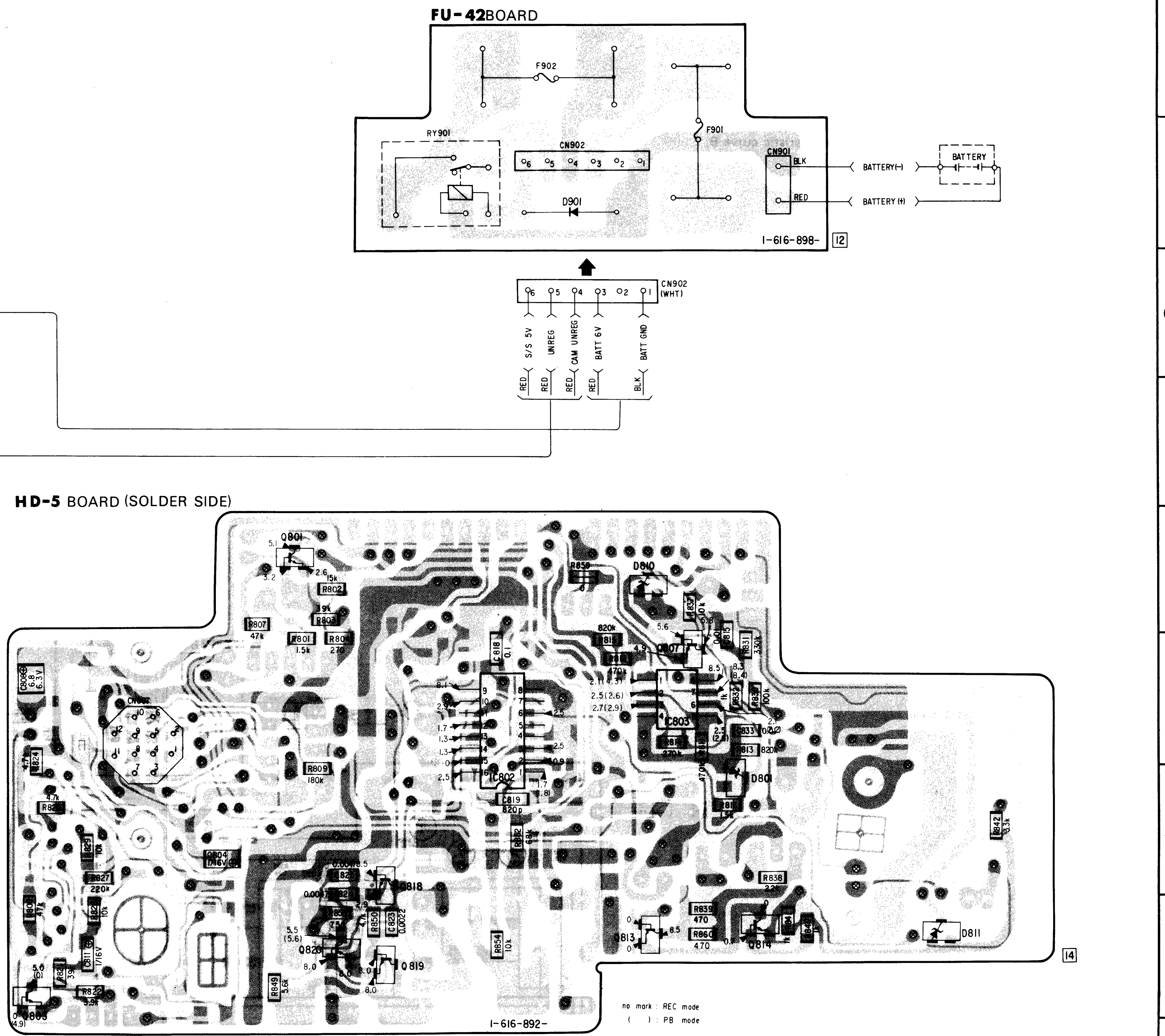
HD-5 BOARD (SOLDER SIDE)


Q801
R807
R801
R802
R803
R809
C808
R824
R829
R827
C804
Q818
Q819
Q820
R849
R854
Q803
1-616

IRING BOARDS

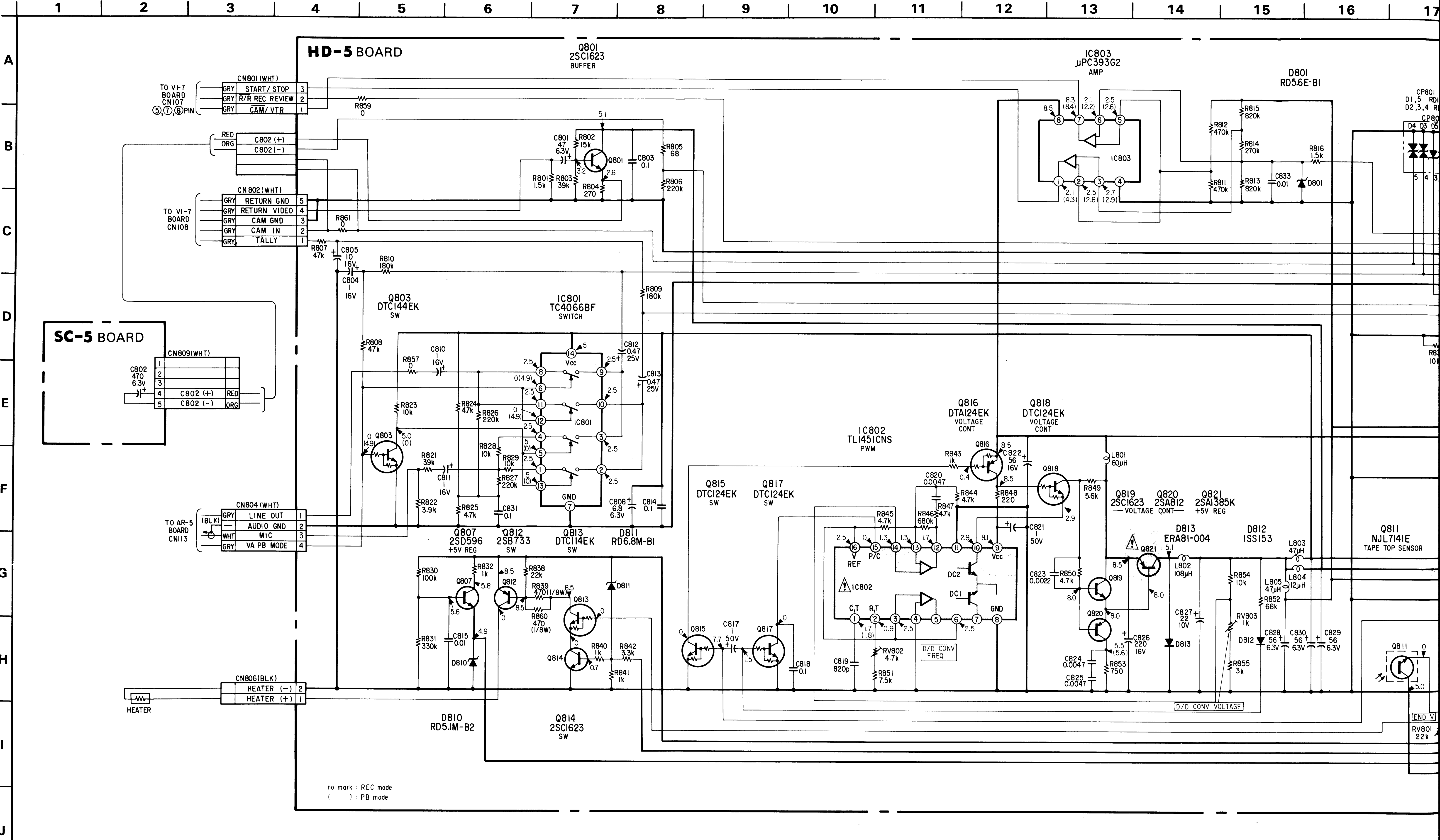

SC-5 BOARD
C802
1-616-893-
CN809
C802 (−)
C802 (+)
ORG
RED
TO VI-7 BOARD CN005
S/S 5V
SYS 5V
MAIN 6V
UNREG 6V
DC OUT
DEW
TAPE TOP
V SENS
BATT GND
CN005 (WHT)
TO VI-7 BOARD CN006
UNREG
VTR ON
UNREG GND
REG GND
S/S 5V
VIDEO 5V
AUDIO 5V
CN006 (WHT)
CN808
CAM UNREG
UNREG
S/S 5V
RED
CN802
CN804
1-616-892-
CN806 (BLK)
HEATER (+)
HEATER (−)
HEATER
no mark : REC mode
( ) : PB mode
CN804
LINE OUT
AUDIO GND
MIC
VA PB MODE
GRY
BLK
WHT
TO AR-5 BOARD CN113

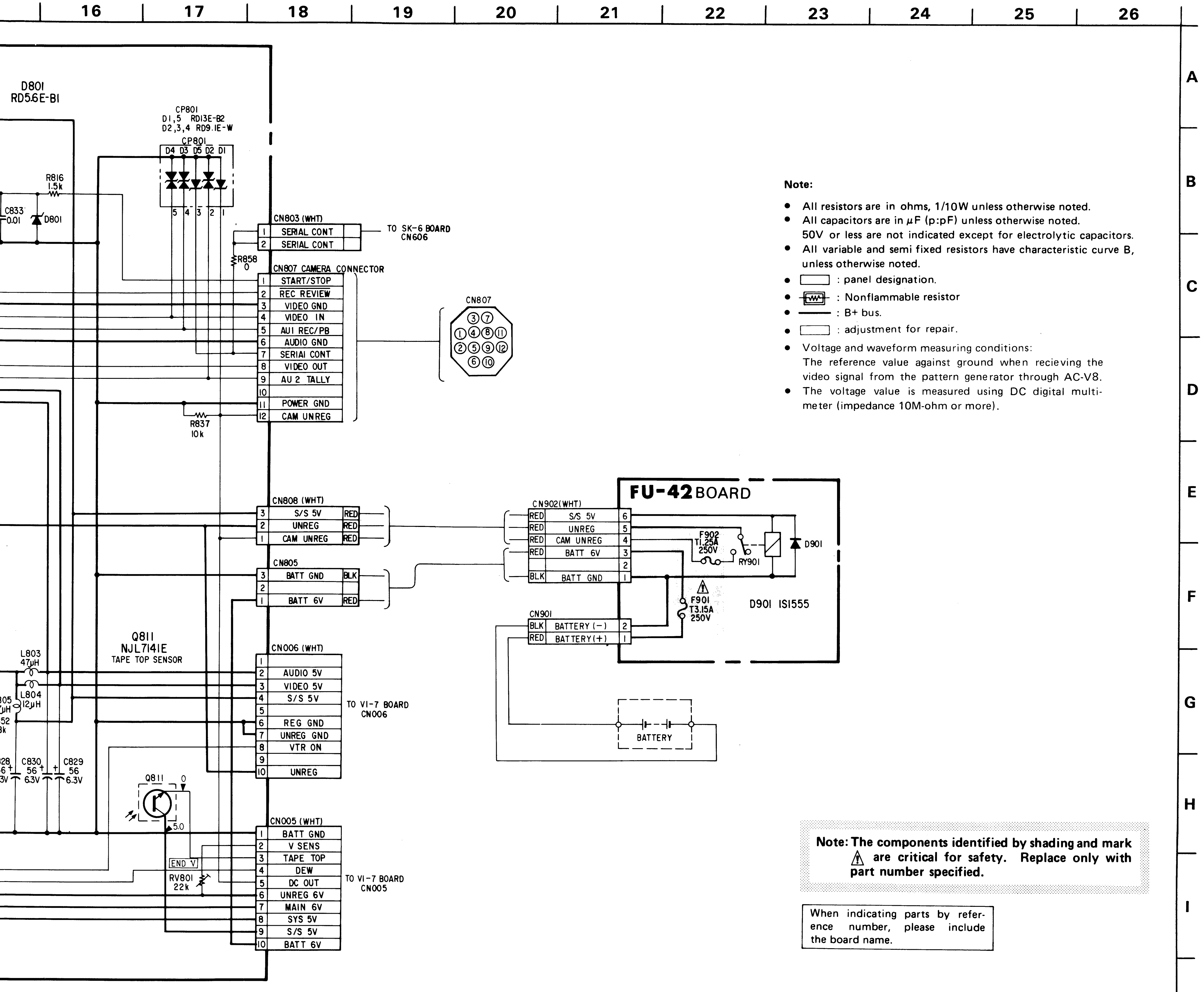
Q , IC	D	RV
801		
	810	
816		
815 807	812	
817		
IC803		
IC802		802
		803
	801	
		801
IC801		
812 818		
811		
	813	
814 813		
820,	811	
819		
821		
803		
Q , IC	D	RV


FU-42 BOARD
F902
F901
RY901
CN902
D901
CN901
BLK
RED
BATTERY(−)
BATTERY(+)
BATTERY
1-616-898-
CN902 (WHT)
S/S 5V
UNREG
CAM UNREG
BATT 6V
BATT GND
HD-5 BOARD (SOLDER SIDE)
Q801
D810
IC803
IC802
D801
Q818
Q820
Q819
Q813
Q814
D811
1-616-892-
no mark : REC mode
( ) : PB mode

HD-5 (VIDEO/AUDIO SELECT, POWER SUPPLY), FU-42 (FUSE), SC-5 (TRANSLATION) SCHEMATIC DIAGRAM

– Ref. No. HD-5, FU-42, SC-5 BOARDS : 2000 series –


HD-5 BOARD
SC-5 BOARD
CN801 (WHT)
START/STOP
R/R REC REVIEW
CAM/VTR
TO VI-7 BOARD CN107 ⑤,⑦,⑧PIN
C802 (+)
C802 (−)
CN802 (WHT)
RETURN GND
RETURN VIDEO
CAM GND
CAM IN
TALLY
TO VI-7 BOARD CN108
CN809 (WHT)
CN804 (WHT)
LINE OUT
AUDIO GND
MIC
VA PB MODE
TO AR-5 BOARD CN113
CN806 (BLK)
HEATER (−)
HEATER (+)
HEATER
Q801 2SC1623 BUFFER
Q803 DTC144EK SW
IC801 TC4066BF SWITCH
IC803 μPC393G2 AMP
D801 RD5.6E-B1
IC802 TL1451CNS PWM
Q815 DTC124EK SW
Q817 DTC124EK SW
Q816 DTA124EK VOLTAGE CONT
Q818 DTC124EK VOLTAGE CONT
Q819 2SC1623
Q820 2SA812
— VOLTAGE CONT —
Q821 2SA1385K +5V REG
D813 ERA81-004
D812 1SS153
Q811 NJL7141E TAPE TOP SENSOR
Q807 2SD596 +5V REG
Q812 2SB733 SW
Q813 DTC114EK SW
D811 RD6.8M-B1
D810 RD5.1M-B2
Q814 2SC1623 SW
L801 60μH
L802 108μH
L803 47μH
L804 12μH
L805 47μH
RV801 22k
RV802 4.7k
RV803 1k
D/D CONV FREQ
D/D CONV VOLTAGE
END V
CP801
no mark : REC mode
( ) : PB mode

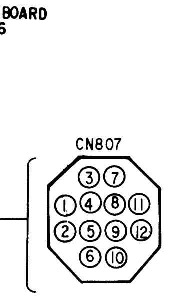

16
17
18
19
20
21
22
23
24
25
26
A
B
C
D
E
F
G
H
I
J
D801
RD5.6E-B1
CP801
D1,5 RD13E-B2
D2,3,4 RD9.1E-W
CP801
D4 D3 D5 D2 D1
R816
1.5k
C833
0.01
D801
CN803 (WHT)
1 SERIAL CONT
2 SERIAL CONT
TO SK-6 BOARD
CN606
R858
0
CN807 CAMERA CONNECTOR
1 START/STOP
2 REC REVIEW
3 VIDEO GND
4 VIDEO IN
5 AU1 REC/PB
6 AUDIO GND
7 SERIAl CONT
8 VIDEO OUT
9 AU 2 TALLY
10
11 POWER GND
12 CAM UNREG
R837
10k
CN807
CN808 (WHT)
3 S/S 5V RED
2 UNREG RED
1 CAM UNREG RED
CN805
3 BATT GND BLK
2
1 BATT 6V RED
FU-42 BOARD
CN902 (WHT)
RED S/S 5V 6
RED UNREG 5
RED CAM UNREG 4
RED BATT 6V 3
2
BLK BATT GND 1
F902
T1.25A
250V
RY901
D901
F901
T3.15A
250V
D901 1S1555
CN901
BLK BATTERY (−) 2
RED BATTERY (+) 1
BATTERY
Q811
NJL7141E
TAPE TOP SENSOR
L803
47μH
L804
12μH
C830
56
6.3V
C829
56
6.3V
CN006 (WHT)
1
2 AUDIO 5V
3 VIDEO 5V
4 S/S 5V
5
6 REG GND
7 UNREG GND
8 VTR ON
9
10 UNREG
TO VI-7 BOARD
CN006
Q811
0
5.0
END V
RV801
22k
CN005 (WHT)
1 BATT GND
2 V SENS
3 TAPE TOP
4 DEW
5 DC OUT
6 UNREG 6V
7 MAIN 6V
8 SYS 5V
9 S/S 5V
10 BATT 6V
TO VI-7 BOARD
CN005

Note:

- All resistors are in ohms, 1/10W unless otherwise noted.
- All capacitors are in μF (p:pF) unless otherwise noted. 50V or less are not indicated except for electrolytic capacitors.
- All variable and semi fixed resistors have characteristic curve B, unless otherwise noted.
- ▭ : panel designation.
- ▭ : Nonflammable resistor
- ——— : B+ bus.
- ▭ : adjustment for repair.
- Voltage and waveform measuring conditions: The reference value against ground when recieving the video signal from the pattern generator through AC-V8.
- The voltage value is measured using DC digital multimeter (impedance 10M-ohm or more).

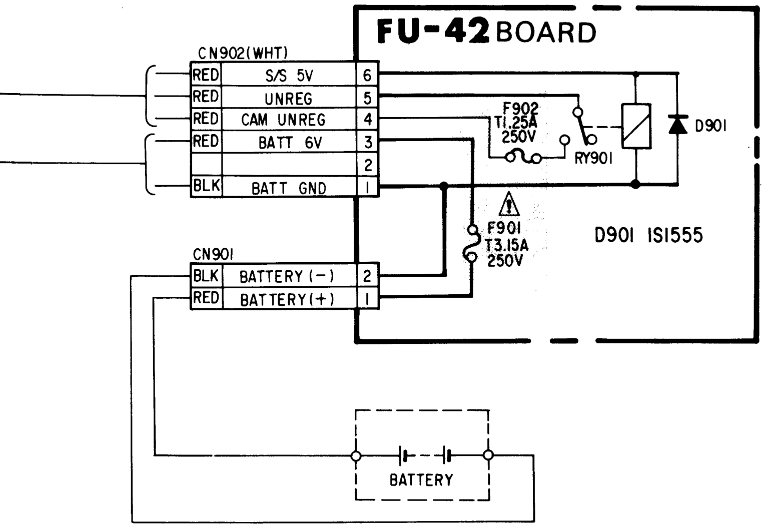
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.


20
21
22
23
24
25
26
A
B
C
D
E
F
G
H
I
J
BOARD
6
CN807
③⑦
①④⑧⑪
②⑤⑨⑫
⑥⑩

Note:

- All resistors are in ohms, 1/10W unless otherwise noted.
- All capacitors are in μF (p:pF) unless otherwise noted.
  50V or less are not indicated except for electrolytic capacitors.
- All variable and semi fixed resistors have characteristic curve B, unless otherwise noted.
- ▭ : panel designation.
- ─▭─ : Nonflammable resistor
- ─── : B+ bus.
- ▭ : adjustment for repair.
- Voltage and waveform measuring conditions:
  The reference value against ground when recieving the video signal from the pattern generator through AC-V8.
- The voltage value is measured using DC digital multimeter (impedance 10M-ohm or more).


FU-42 BOARD
CN902(WHT)
RED S/S 5V 6
RED UNREG 5
RED CAM UNREG 4
RED BATT 6V 3
2
BLK BATT GND 1
F902
T1.25A
250V
RY901
D901
F901
T3.15A
250V
D901 IS1555
CN901
BLK BATTERY (−) 2
RED BATTERY (+) 1
BATTERY

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

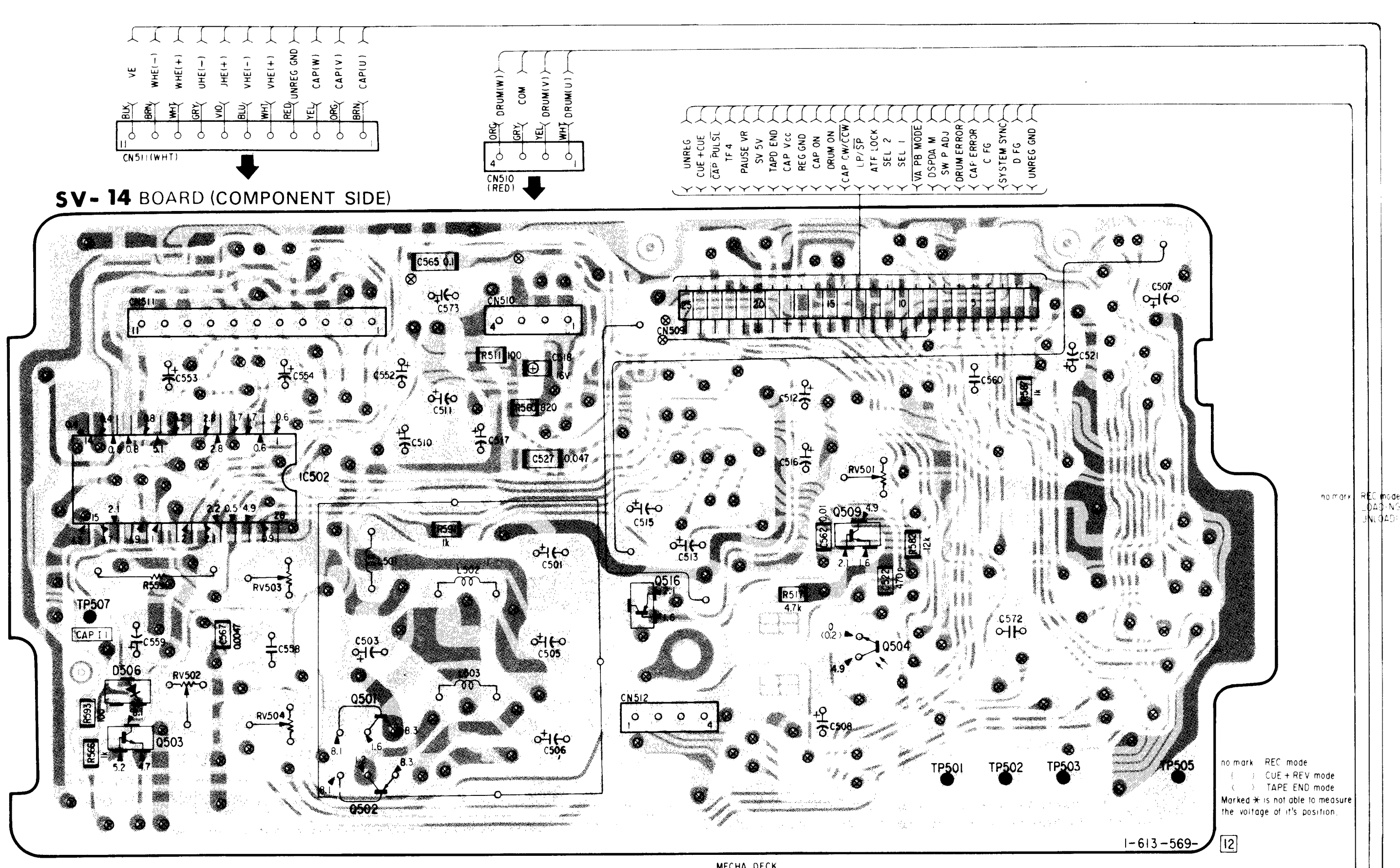
SERVO/MECHANISM CONTROL

MC-8 (SERVO/MECHANISM CONTROL), SV-14 (DRUM MOTOR/CAPSTAN MOTOR DRIVE), MS-4 (MODE SWITCH, CONTROL MOTOR), LS-9 (LOADING SWITCH), LD-1 (TAPE SENSOR LED), RS-15 (LOADING MOTOR/CONTROL MOTOR DRIVE) PRINTE

– Ref. No. MC-8 BOARD : 1000 series, SV-14, MS-4, LS-9, LD-1 BOARDS : 5000 series, RS-15 BOARD : 8000 series –

Q, IC	D	ADJ	TP
IC502		RV501	
509			
		RV503	
516			507
504			
506			
		RV502	
501		RV504	
503			
502			501,502 503,505
			501,502 503,505
512	504		
510	502		
513	501		507
508			
515 IC505 IC504			
IC501			
511 517			
514, 518 519			
Q, IC	D	ADJ	TP

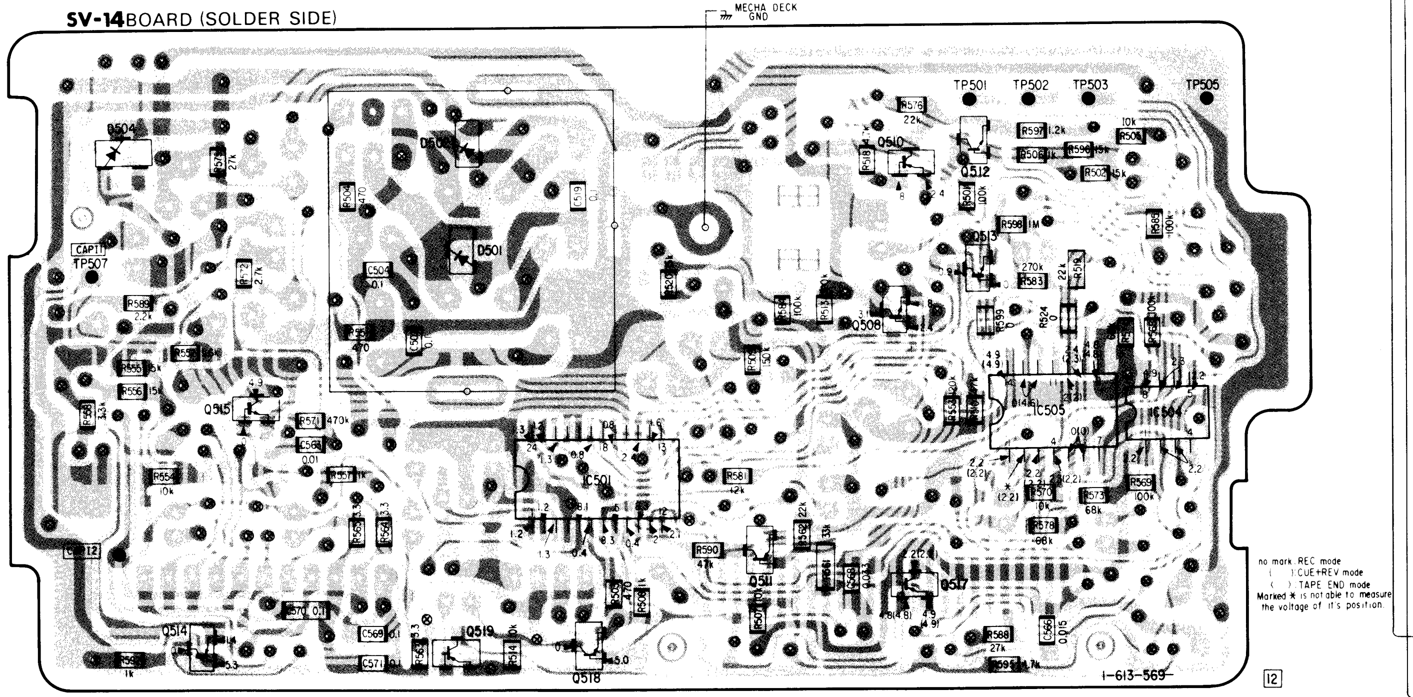
SV-14 BOARD (COMPONENT SIDE)



VE
WHE(−)
WHE(+)
VHE(−)
UHE(−)
UHE(+)
VHE(+)
UNREG GND
CAP(W)
CAP(V)
CAP(U)
CN511 (WHT)
DRUM(W)
COM
DRUM(V)
DRUM(U)
CN510 (RED)
UNREG
CUE+CUE
CAP PULSE
TP 4
PAUSE VR
SV 5V
TAPD END
CAP Vcc
REG GND
CAP ON
DRUM ON
CAP CW/CCW
PG SP
ATF LOCK
SEL 2
SEL 1
VE PB MODE
DSPBG M
SW P ADJ
DRUM ERROR
CAP ERROR
C FG
SYSTEM SYNC
D FG
UNREG GND
CN509
CN512
IC502
RV501
RV502
RV503
RV504
Q501
Q502
Q503
Q504
Q506
Q509
Q516
D506
TP501
TP502
TP503
TP505
TP507
1-613-569-
12

no mark : REC mode
( ) : CUE + REV mode
〈 〉 : TAPE END mode
Marked ✳ is not able to measure the voltage of it's position.

SV-14 BOARD (SOLDER SIDE)



MECHA DECK GND
TP501
TP502
TP503
TP505
TP507
Q504
Q508
Q510
Q511
Q512
Q513
Q514
Q515
Q517
Q518
Q519
D501
D502
IC501
IC504
IC505
1-613-569-
12

no mark : REC mode
( ) : CUE+REV mode
〈 〉 : TAPE END mode
Marked ✳ is not able to measure the voltage of it's position.

Q IC	IC501 605 606 602 603 601 IC502 607 604	Q IC
D	502 503 501	D

RS-15 BOARD (COMPONENT SIDE)

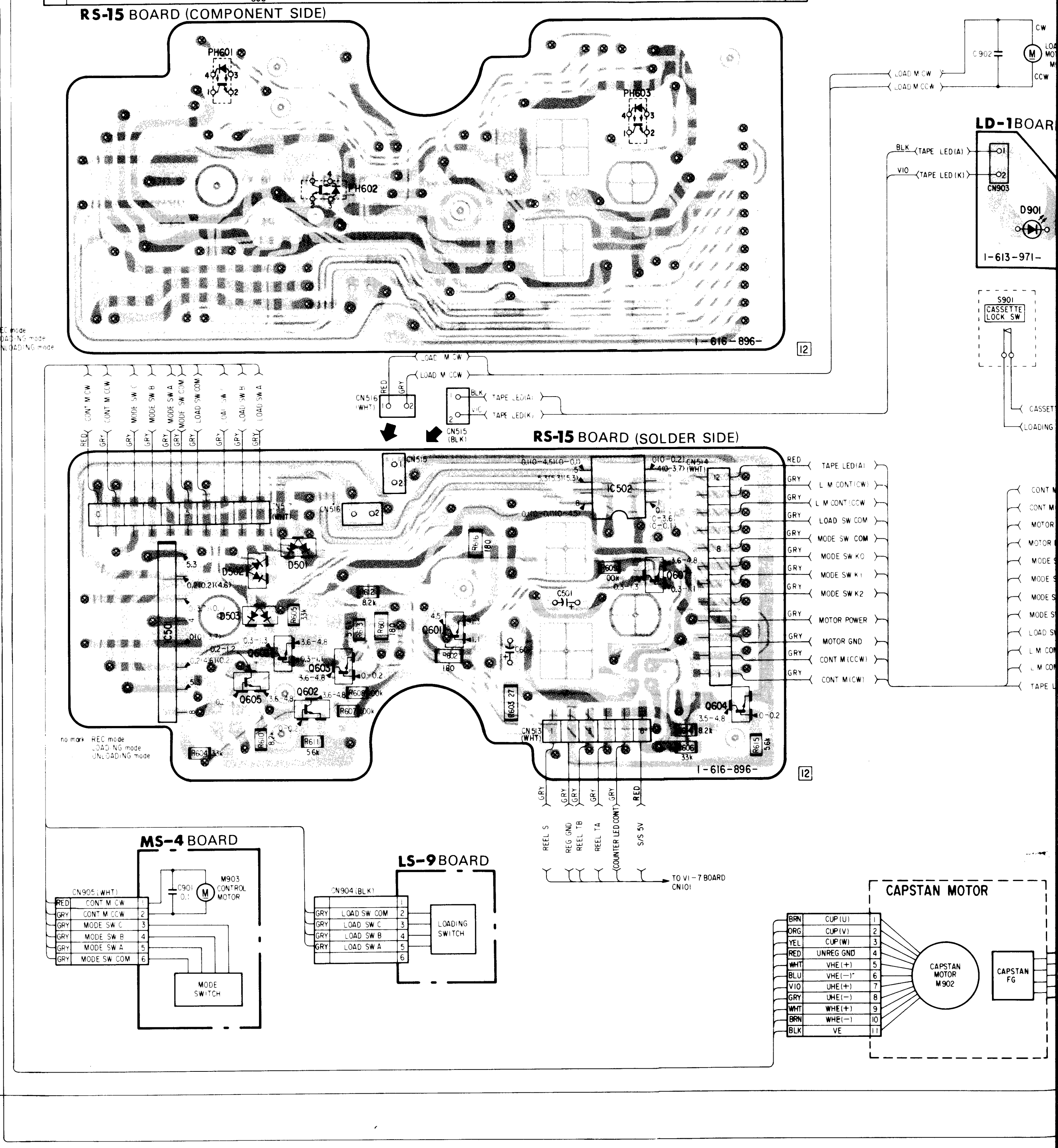
RS-15 BOARD (SOLDER SIDE)

MS-4 BOARD

LS-9 BOARD

LD-1 BOARD

CAPSTAN MOTOR



PH601
PH602
PH603
1-616-896-
12
LOAD M CW
LOAD M CCW
C902
M901
CW
CCW
TAPE LED(A)
TAPE LED(K)
CN903
D901
1-613-971-
S901
CASSETTE LOCK SW
CONT M CW
CONT M CCW
MODE SW C
MODE SW B
MODE SW A
MODE SW COM
LOAD SW C
LOAD SW B
LOAD SW A
LOAD SW COM
CN516 (WHT)
CN515 (BLK)
CN514 (WHT)
CN513 (WHT)
IC502
Q601
Q602
Q603
Q604
Q605
D501
D502
D503
TAPE LED(A)
L M CONT(CW)
L M CONT CCW
LOAD SW COM
MODE SW COM
MODE SW K0
MODE SW K1
MODE SW K2
MOTOR POWER
MOTOR GND
CONT M(CCW)
CONT M(CW)
REEL S
REG GND
REEL T
COUNTER LED(CW)
S/S 5V
TO VI-7 BOARD CN101
CN905 (WHT)
C901
M903 CONTROL MOTOR
MODE SWITCH
CN904 (BLK)
LOADING SWITCH
CUP(U)
CUP(V)
CUP(W)
UNREG GND
VHE(+)
VHE(−)
UHE(+)
UHE(−)
WHE(+)
WHE(−)
VE
CAPSTAN MOTOR M902
CAPSTAN FG

no mark : REC mode
( ) : LOAD NG mode
〈 〉 : UNLOADING mode

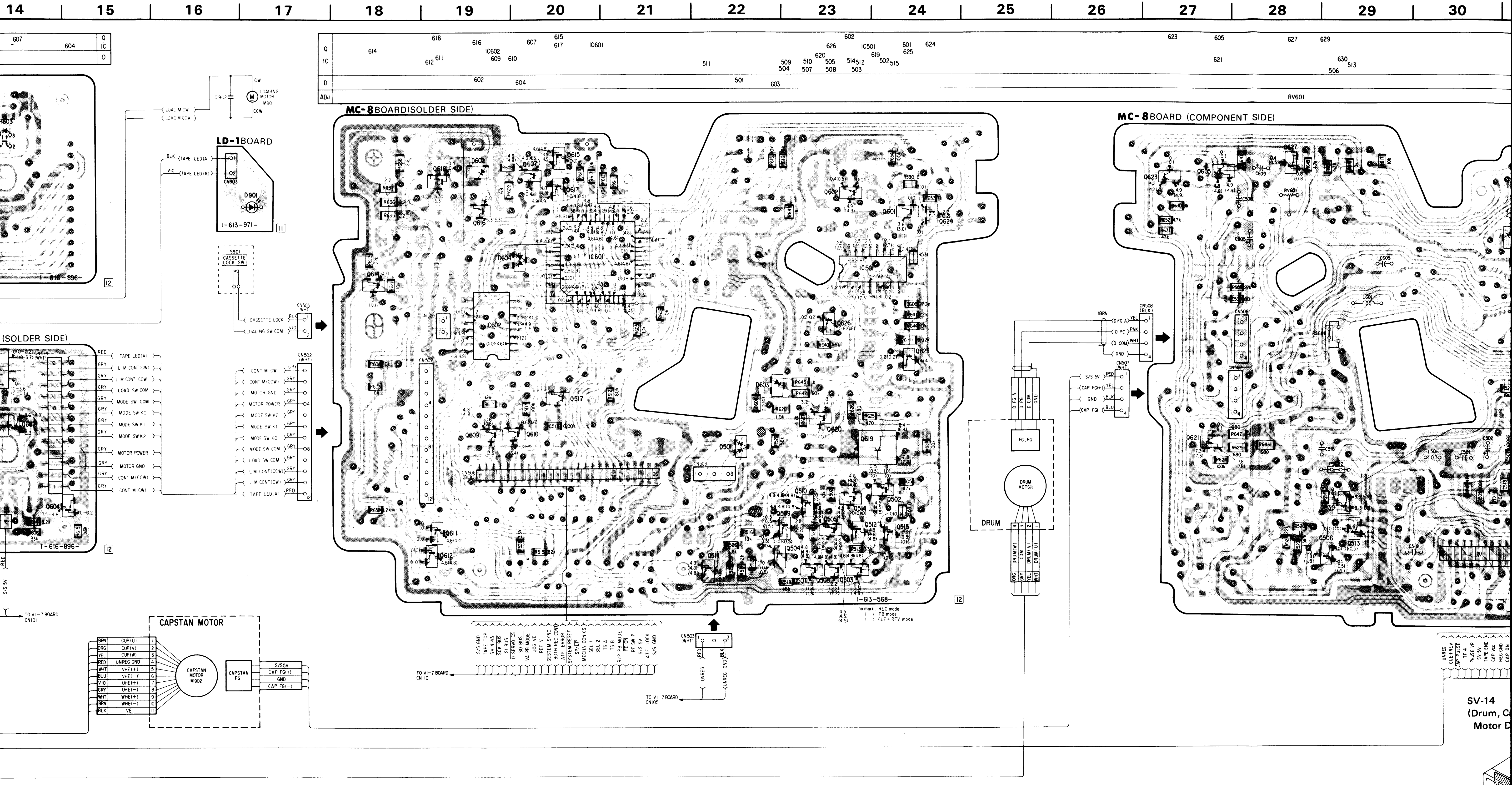
Note:

- ⊗ : Through hole.
- ▨ : pattern from the side which enables seeing.
- ▨ : B+ pattern from the side which enables seeing.
- ▨ : patter of the rear side.

When indicating parts by reference number, please include the board name.

Caution:
Pattern face side: (Solder Side) Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side) Parts on the parts face side seen from the pattern face are indicated.

G MOTOR/CONTROL MOTOR DRIVE) PRINTED WIRING BOARDS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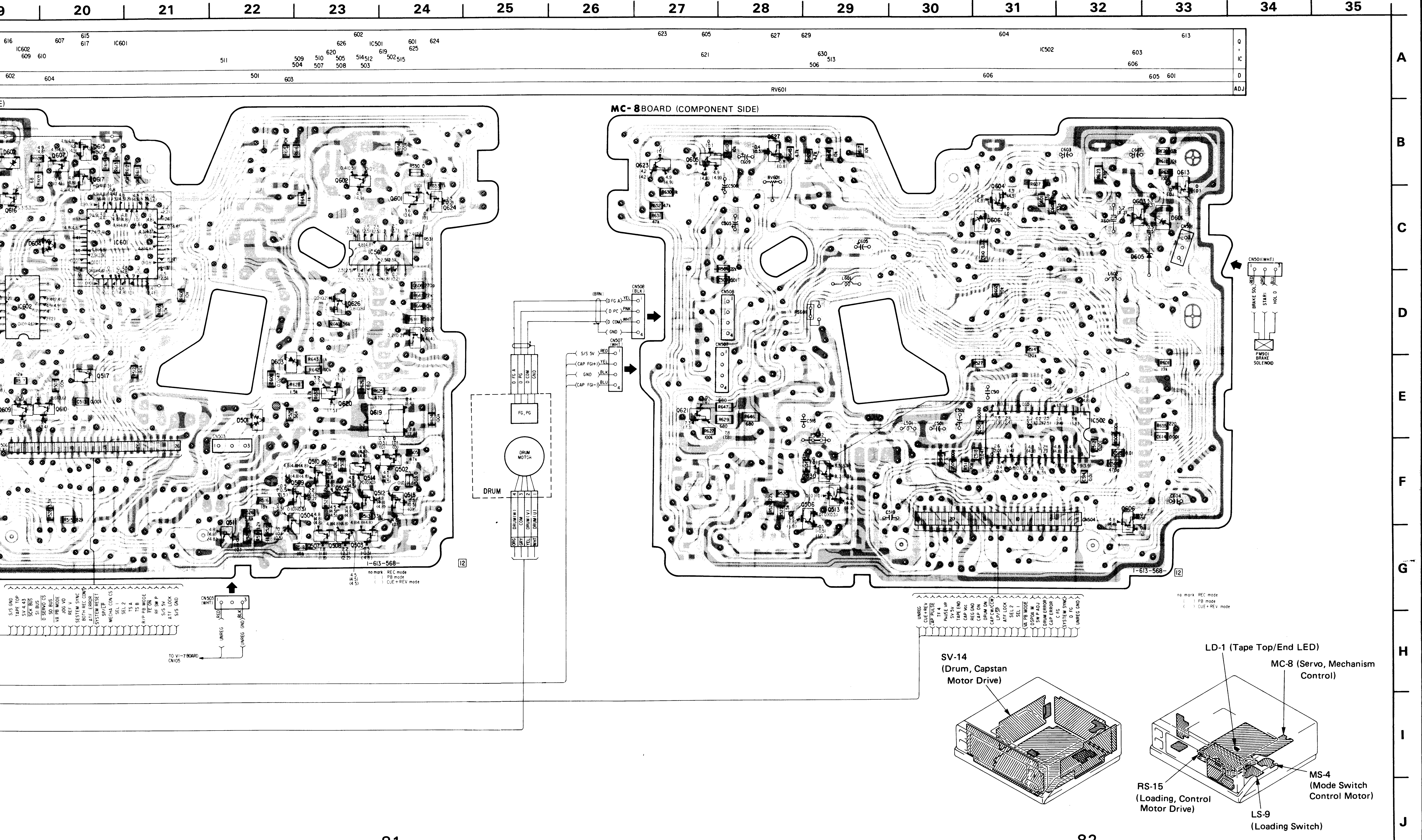
Q
IC
D
ADJ
RV601
(SOLDER SIDE)
1-616-896-
LD-1BOARD
CN903
D901
1-613-971-
TAPE LED(A)
TAPE LED(K)
LOAD M CW
LOAD M CCW
C902
LOADING MOTOR M901
CW
CCW
S901 CASSETTE LOCK SW
CASSETTE LOCK
LOADING SW COM
CN505 (WHT)
CN502 (WHT)
CONT M(CW)
CONT M(CCW)
MOTOR GND
MOTOR POWER
MODE SW K2
MODE SW K1
MODE SW K0
MODE SW COM
LOAD SW COM
L M CONT(CCW)
L M CONT(CW)
TAPE LED(A)
MC-8BOARD(SOLDER SIDE)
IC601
IC602
IC501
1-613-568-
no mark REC mode
( ) PB mode
〈 〉 CUE+REV mode
CN503 (WHT)
UNREG
UNREG GND
TO VI-7 BOARD CN105
TO VI-7 BOARD CN110
TO VI-7 BOARD CN101
S/S GND
TAPE TOP
SV 4.43
SCK BUS
SI BUS
D SERVO CS
SO BUS
VA PB MODE
JOG VD
REF V
SYSTEM SYNC
BOTH REC CONT
ATF ERROR
SYSTEM RESET
SP/LP
MECHA CON CS
SEL 1
SEL 2
TS A
TS B
R/P PB MODE
RF SW P
S/S 5V
ATF LOCK
CAPSTAN MOTOR
CUP(U)
CUP(V)
CUP(W)
UNREG GND
VHE(+)
VHE(−)
UHE(+)
UHE(−)
WHE(+)
WHE(−)
VE
CAPSTAN MOTOR M902
CAPSTAN FG
S/S5V
CAP FG(+)
GND
CAP FG(−)
DRUM
DRUM MOTOR
FG, PG
D FG A
D PG
D COM
DRUM(W)
DRUM(V)
DRUM(U)
CN508 (BLK)
CN507 (WHT)
MC-8BOARD (COMPONENT SIDE)
SV-14 (Drum, C Motor D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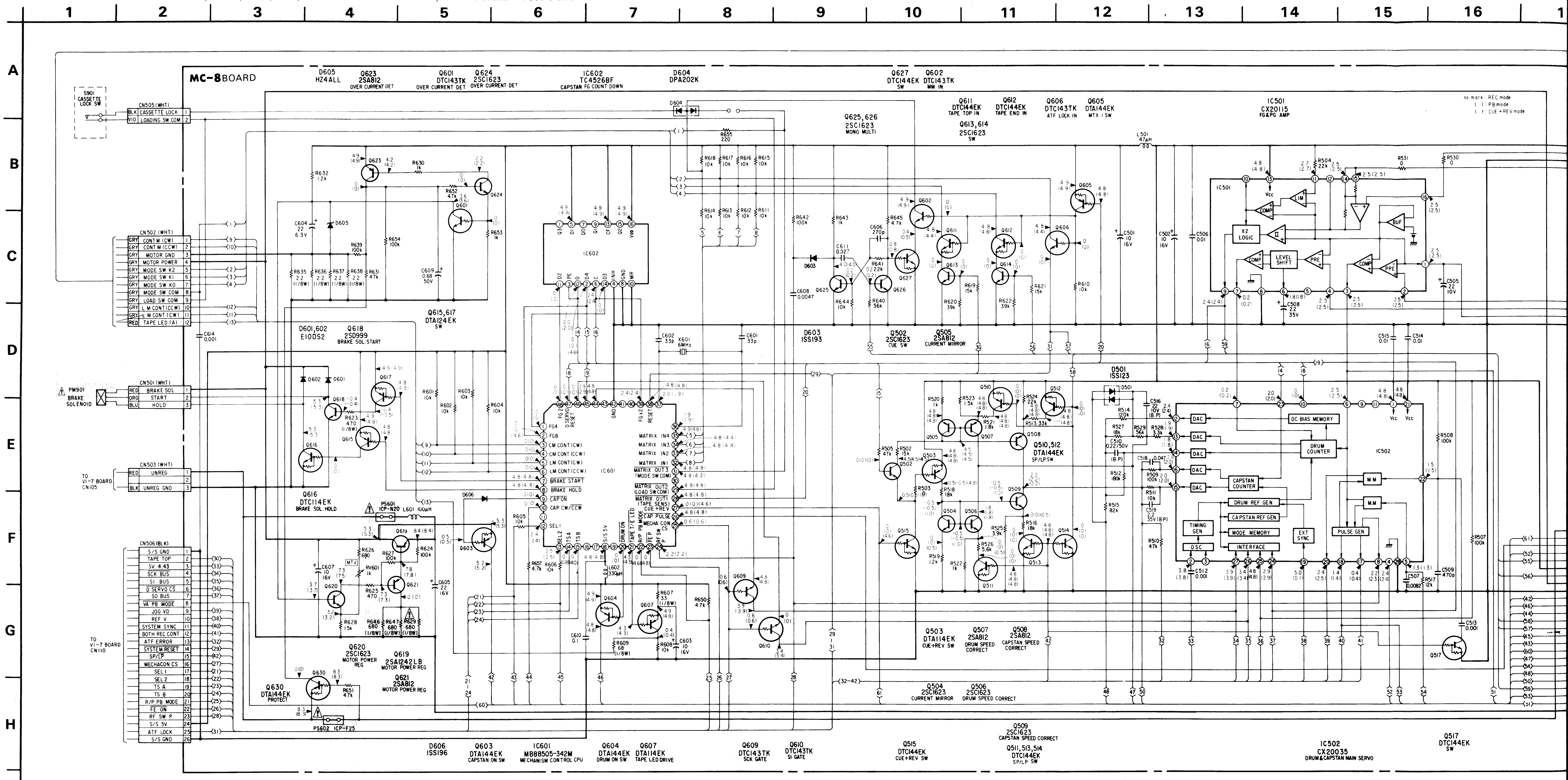
A
B
C
D
E
F
G
H
I
J
Q
IC
D
ADJ
616
IC602
609
610
607
615
617
IC601
511
509
504
510
507
620
505
508
626
602
514
512
503
IC501
619
502
515
601
625
624
623
605
621
627
629
630
513
506
604
IC502
603
606
613
601
605
RV601
602
604
501
603
MC-8 BOARD (COMPONENT SIDE)
(BRN)
D FG A
D PC
D COM
GND
YEL
PNK
WHT
CN508 (BLK)
S/S 5V
CAP FG(+)
GND
CAP FG(−)
RED
YEL
BLK
BLU
CN507 (WHT)
D FG A
D PG
D COM
GND
FG, PG
DRUM MOTOR
DRUM
DRUM (W)
DRUM (V)
DRUM (U)
ORG
GRY
YEL
WHT
CN501 (WHT)
RED
ORG
BLU
BRAKE SOL
STARI
HOL D
PM901 BRAKE SOLENOID
CN503 (WHT)
RED
BLK
UNREG
UNREG GND
TO VI-7 BOARD CN105
S/S GND
TAPE TOP
SV 4.43
SCK BUS
SI BUS
D SERVO CS
SO BUS
VA PB MODE
JOG VD
REF V
SESTEM SYNC
BOTH REC CONT
ATF ERROR
SYSTEM RESET
SP/LP
MECHA CON CS
SEL 1
SEL 2
TS A
TS B
R/P PB MODE
FE ON
RF SW P
S/S 5V
ATF LOCK
S/S GND
UNREG
CUE+REV
CAP PULSE
TF 4
PAUSE VP
SV 5V
TAPE END
CAP Vcc
REG GND
CAP ON
DRUM ON
CAP CW/CCW
LP/SP
ATF LOCK
SEL 2
SEL 1
VA PB MODE
DSPDA M
SW P ADJ
DRUM ERROR
CAP ERROR
C FG
SYSTEM SYNC
D FG
UNREG GND
IC601
IC602
IC501
IC502
CN503
CN504
CN506
1-613-568-
12
no mark : REC mode
( ) PB mode
( ) CUE+REV mode
SV-14 (Drum, Capstan Motor Drive)
LD-1 (Tape Top/End LED)
MC-8 (Servo, Mechanism Control)
RS-15 (Loading, Control Motor Drive)
LS-9 (Loading Switch)
MS-4 (Mode Switch Control Motor)

SERVO/MECHANISM CONTROL SERVO/MECHANISM CONTROL

MC-8 (SERVO/MECHANISM CONTROL), SV-14 (DRUM MOTOR/CAPSTAN MOTOR DRIVE), MS-4 (MODE SWITCH, CONTROL MOTOR), LS-9 (LOADING SWITCH), LD-1 (TAPE SENSOR LED), RS-15 (LOADING MOTOR/CONTROL MOTOR DRIVE) SCHEMATI

– Ref. No. MC-8 BOARD : 1000 series, SV-14, MS-4, LS-9, LD-1 BOARDS : 5000 series, RS-15 BOARD : 8000 series –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11
12
13
14
15
16
A
B
C
D
E
F
G
H
MC-8 BOARD
S901 CASSETTE LOCK SW
CN505 (WHT)
CASSETTE LOCK
LOADING SW COM
CN502 (WHT)
CONT M (CW)
CONT M (CCW)
MOTOR GND
MOTOR POWER
MODE SW K2
MODE SW K1
MODE SW K0
MODE SW COM
LOAD SW COM
L M CONT (CCW)
L M CONT (CW)
TAPE LED (A)
PM901 BRAKE SOLENOID
CN501 (WHT)
BRAKE SOL
START
HOLD
CN503 (WHT)
UNREG
UNREG GND
TO VI-7 BOARD CN105
CN506 (BLK)
S/S GND
TAPE TOP
SV 4.43
SCK BUS
SI BUS
D SERVO CS
SO BUS
VA PB MODE
JOG VD
REF V
SYSTEM SYNC
BOTH REC CONT
ATF ERROR
SYSTEM RESET
SP/LP
MECHACON CS
SEL 1
SEL 2
TS A
TS B
R/P PB MODE
FE ON
RF SW P
S/S 5V
ATF LOCK
S/S GND
TO VI-7 BOARD CN110
D605 HZ4ALL
Q623 2SA812 OVER CURRENT DET
Q601 DTC143TK OVER CURRENT DET
Q624 2SC1623 OVER CURRENT DET
IC602 TC4526BF CAPSTAN FG COUNT DOWN
D604 DPA202K
Q627 DTC144EK SW
Q602 DTC143TK MM IN
Q611 DTC144EK TAPE TOP IN
Q612 DTC144EK TAPE END IN
Q606 DTC143TK ATF LOCK IN
Q605 DTA144EK MTX 1 SW
IC501 CX20115 FG&PG AMP
no mark : REC mode
( ) : PB mode
< > : CUE+REV mode
Q625, 626 2SC1623 MONO MULTI
Q613, 614 2SC1623 SW
L501 47μH
IC602
IC501
X2 LOGIC
COMP
LIM
BUF
LEVEL SHIFT
PRE
PPE
Vcc
D601, 602 E10DS2
Q618 2SD999 BRAKE SOL. START
Q615, 617 DTA124EK SW
D603 1SS193
Q502 2SC1623 CUE SW
Q505 2SA812 CURRENT MIRROR
X601 6MHz
D501 1SS123
Q616 DTC114EK BRAKE SOL. HOLD
PS601 ICP-N20
L601 100μH
MTV
RV601
FG4
FG8
CM CONT (CW)
CM CONT (CCW)
LM CONT (CW)
LM CONT (CCW)
BRAKE START
BRAKE HOLD
CAP ON
CAP CW/CCW
IC601
MATRIX IN4
MATRIX IN3
MATRIX IN2
MATRIX IN1
MATRIX OUT3 (MODE SW COM)
MATRIX OUT2 (LOAD SW COM)
MATRIX OUT1 (TAPE SENS)
CUE+REV
CAP PULSE
MECHA CON CS
D SERVO RESET
GND
FG×2
RESET
SEL1
SEL2
TSA
TSB
S/S 5V
DRUM ON
TAPE T/E LED
R/P PB MODE
FEP
RF SW P
L602 330μH
Q510, 512 DTA144EK SP/LP SW
DAC
DC BIAS MEMORY
DRUM COUNTER
IC502
CAPSTAN COUNTER
DRUM REF GEN
CAPSTAN REF GEN
TIMING GEN
MODE MEMORY
OSC
INTERFACE
EXT SYNC
PULSE GEN
M.M
Q620 2SC1623 MOTOR POWER REG
Q619 2SA1242LB MOTOR POWER REG
Q621 2SA812 MOTOR POWER REG
Q630 DTA144EK PROTECT
PS602 ICP-F25
Q503 DTA114EK CUE+REV SW
Q507 2SA812 DRUM SPEED CORRECT
Q508 2SA812 CAPSTAN SPEED CORRECT
Q504 2SC1623 CURRENT MIRROR
Q506 2SC1623 DRUM SPEED CORRECT
Q509 2SC1623 CAPSTAN SPEED CORRECT
D606 1SS196
Q603 DTA144EK CAPSTAN ON SW
IC601 MB88505-342M MECHANISM CONTROL CPU
Q604 DTA144EK DRUM ON SW
Q607 DTA144EK TAPE LED DRIVE
Q609 DTC143TK SCK GATE
Q610 DTC143TK SI GATE
Q515 DTC144EK CUE+REV SW
Q511, 513, 514 DTC144EK SP/LP SW
IC502 CX20035 DRUM&CAPSTAN MAIN SERVO
Q517 DTC144EK SW

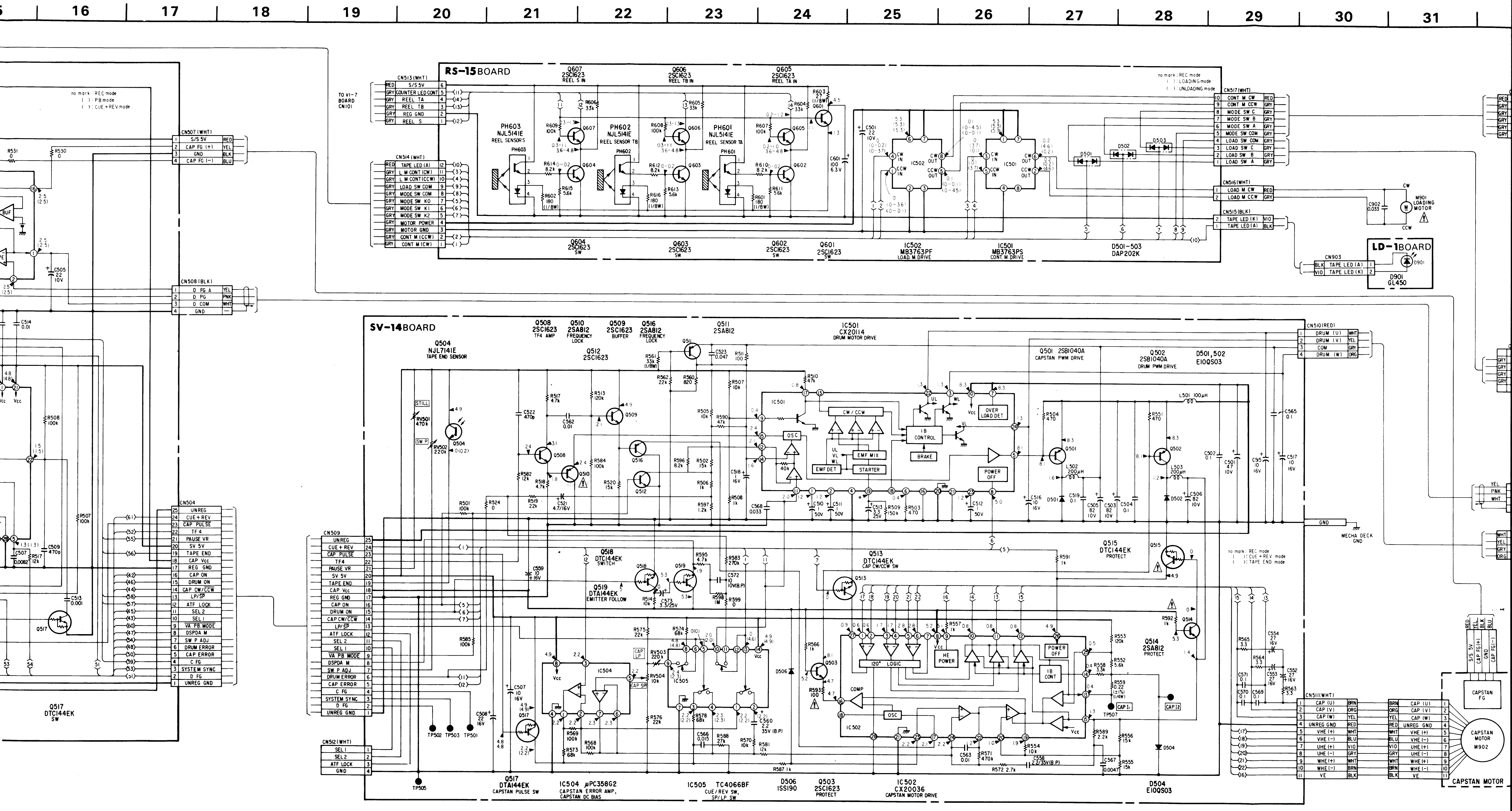
Note:

- All resistors are in ohms, 1/10W unless otherwise noted.
- All capacitors are in μF (p:pF) unless otherwise noted. 50V or less are not indicated except for electrolytic capacitors.
- All variable and semi fixed resistors have characteristic curve B, unless otherwise noted.
- ▭ : panel designation.
- -▭- : Nonflammable resistor
- —— : B+ bus.
- ▭ : adjustment for repair.
- Voltage and waveform measuring conditions: The reference value against ground when recieving the video signal from the pattern generator through AC-V8.
- The voltage value is measured using DC digital multi-meter (impedance 10M-ohm or more).

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

MOTOR DRIVE) SCHEMATIC DIAGRAM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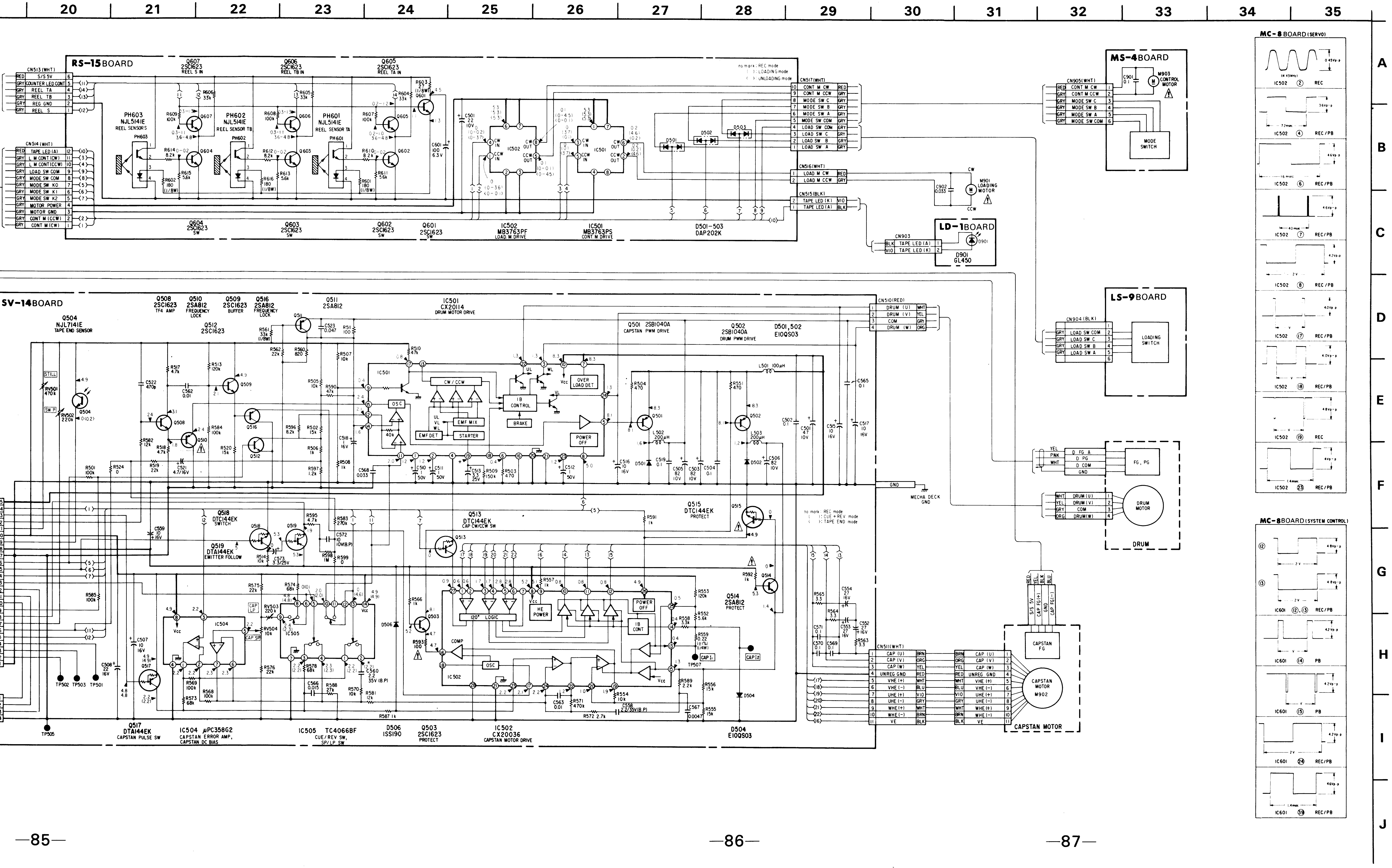
RS-15 BOARD
SV-14 BOARD
LD-1 BOARD
CN513 (WHT)
CN514 (WHT)
CN517 (WHT)
CN516 (WHT)
CN515 (BLK)
CN507 (WHT)
CN508 (BLK)
CN504
CN509
CN512 (WHT)
CN510 (RED)
CN511 (WHT)
CN903
TO VI-7 BOARD CN101
Q607 2SC1623 REEL S IN
Q606 2SC1623 REEL TB IN
Q605 2SC1623 REEL TA IN
PH603 NJL5141E REEL SENSOR S
PH602 NJL5141E REEL SENSOR TB
PH601 NJL5141E REEL SENSOR TA
Q604 2SC1623 SW
Q603 2SC1623 SW
Q602 2SC1623 SW
Q601 2SC1623 SW
IC502 MB3763PF LOAD M DRIVE
IC501 MB3763PS CONT M DRIVE
D501–503 DAP202K
M901 LOADING MOTOR
D901 GL450
Q504 NJL7141E TAPE END SENSOR
Q508 2SC1623 TF4 AMP
Q510 2SA812 FREQUENCY LOCK
Q509 2SC1623 BUFFER
Q516 2SA812 FREQUENCY LOCK
Q512 2SC1623
Q511 2SA812
IC501 CX20114 DRUM MOTOR DRIVE
Q501 2SB1040A CAPSTAN PWM DRIVE
Q502 2SB1040A DRUM PWM DRIVE
D501, 502 E10QS03
Q518 DTC144EK SWITCH
Q519 DTA144EK EMITTER FOLLOW
Q513 DTC144EK CAP CW/CCW SW
Q515 DTC144EK PROTECT
Q514 2SA812 PROTECT
Q517 DTA144EK CAPSTAN PULSE SW
IC504 μPC358G2 CAPSTAN ERROR AMP, CAPSTAN DC BIAS
IC505 TC4066BF CUE/REV SW, SP/LP SW
D506 1SS190
Q503 2SC1623 PROTECT
IC502 CX20036 CAPSTAN MOTOR DRIVE
D504 E10QS03
Q517 DTC144EK SW
CAPSTAN MOTOR M902
CAPSTAN FG
MECHA DECK GND
no mark : REC mode
( ) : PB mode
( ) : CUE + REV mode
no mark : REC mode
( ) : LOADING mode
( ) : UNLOADING mode
no mark : REC mode
( ) : CUE + REV mode
( ) : TAPE END mode
TP501
TP502
TP503
TP505
TP507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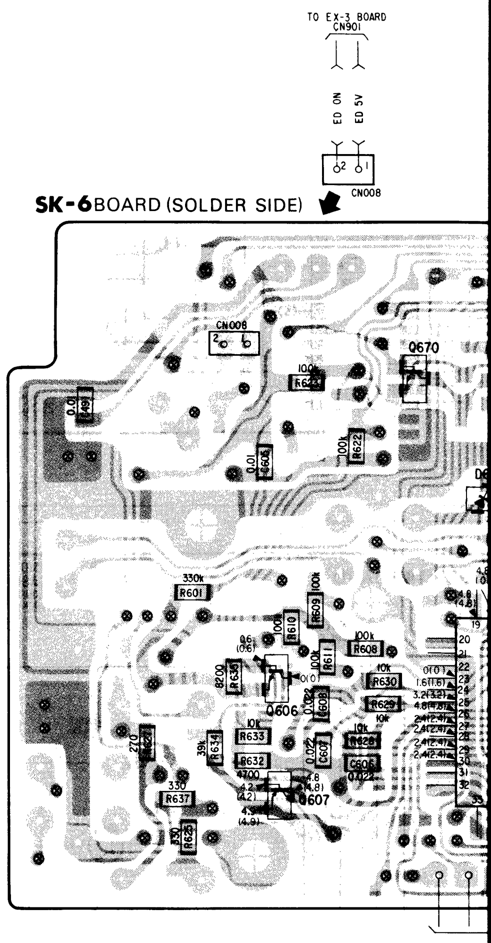
I
J
RS-15 BOARD
CN513 (WHT)
CN514 (WHT)
PH603 NJL5141E REEL SENSORS
PH602 NJL5141E REEL SENSOR TB
PH601 NJL5141E REEL SENSOR TA
Q607 2SC1623 REEL S IN
Q606 2SC1623 REEL TB IN
Q605 2SC1623 REEL TA IN
Q604 2SC1623 SW
Q603 2SC1623 SW
Q602 2SC1623 SW
Q601 2SC1623 SW
IC502 MB3763PF LOAD M DRIVE
IC501 MB3763PS CONT M DRIVE
D501-503 DAP202K
CN517 (WHT)
CN516 (WHT)
CN515 (BLK)
MS-4 BOARD
CN905 (WHT)
M903 CONTROL MOTOR
MODE SWITCH
M901 LOADING MOTOR
LD-1 BOARD
CN903
D901 GL450
LS-9 BOARD
CN904 (BLK)
LOADING SWITCH
SV-14 BOARD
Q504 NJL7141E TAPE END SENSOR
Q508 2SC1623 TF4 AMP
Q510 2SA812 FREQUENCY LOCK
Q509 2SC1623 BUFFER
Q516 2SA812 FREQUENCY LOCK
Q512 2SC1623
Q511 2SA812
IC501 CX20114 DRUM MOTOR DRIVE
Q501 2SB1040A CAPSTAN PWM DRIVE
Q502 2SB1040A DRUM PWM DRIVE
D501,502 E10QS03
CN510 (RED)
FG, PG
DRUM MOTOR
DRUM
MECHA DECK GND
Q518 DTC144EK SWITCH
Q519 DTA144EK EMITTER FOLLOW
Q513 DTC144EK CAP CW/CCW SW
Q515 DTC144EK PROTECT
Q514 2SA812 PROTECT
CN511 (WHT)
CAPSTAN FG
CAPSTAN MOTOR M902
CAPSTAN MOTOR
Q517 DTA144EK CAPSTAN PULSE SW
IC504 μPC358G2 CAPSTAN ERROR AMP, CAPSTAN DC BIAS
IC505 TC4066BF CUE/REV SW, SP/LP SW
D506 1SS190
Q503 2SC1623 PROTECT
IC502 CX20036 CAPSTAN MOTOR DRIVE
D504 E10QS03
TP502
TP503
TP501
TP505
TP507
MC-8 BOARD (SERVO)
IC502 ② REC
IC502 ④ REC/PB
IC502 ⑥ REC/PB
IC502 ⑦ REC/PB
IC502 ⑧ REC/PB
IC502 ⑰ REC/PB
IC502 ⑱ REC/PB
IC502 ⑲ REC
IC502 ㉓ REC/PB
MC-8 BOARD (SYSTEM CONTROL)
IC601 ⑫, ⑬ REC/PB
IC601 ⑭ PB
IC601 ⑮ PB
IC601 ㉔ REC/PB
IC601 ㊴ REC/PB

SK-6 (MODE CONTROL), DS-14 (POWER CONTROL/COMMUNICA

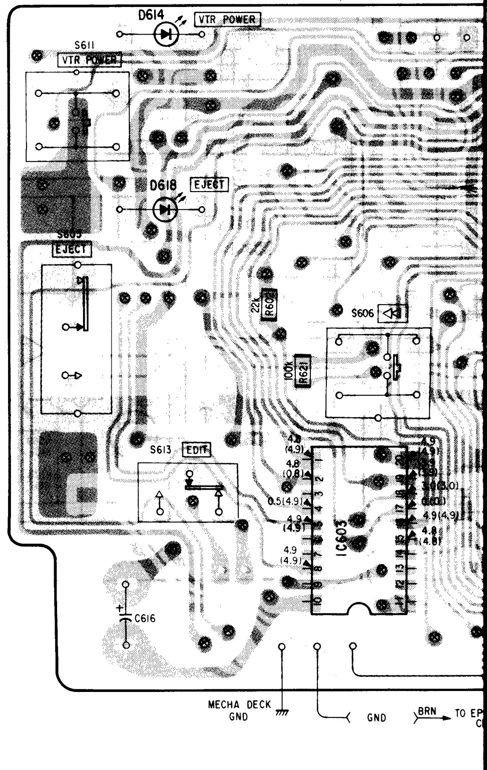
– Ref. No. SK-6 BOARD : 5000 series, DS-14 BOARD : 7000 series –

Q , IC	D	TP
601, 604 612 602,605 670	602	
609		
	603, 604	
	613, 605	
IC605 606 611 IC601	620 622	
	601	
607 610 IC604		
	621	
	614	
	618, 616, 619 615	
	617	
608	607	
613	611	
	612	
IC602 IC603 603	608, 609 606	602 601 605 606 604 603
Q , IC	D	TP

SK-6 BOARD (SOLDER SIDE)


TO EX-3 BOARD CN901
ED ON
ED 5V
CN008
Q670
Q606
Q607
R601
R633
R637

SK-6 BOARD (COMPONENT SIDE)


D614
VTR POWER
S611
D618
EJECT
S602
S606
S613
EDIT
IC603
C616
MECHA DECK GND
GND
BRN
TO EP

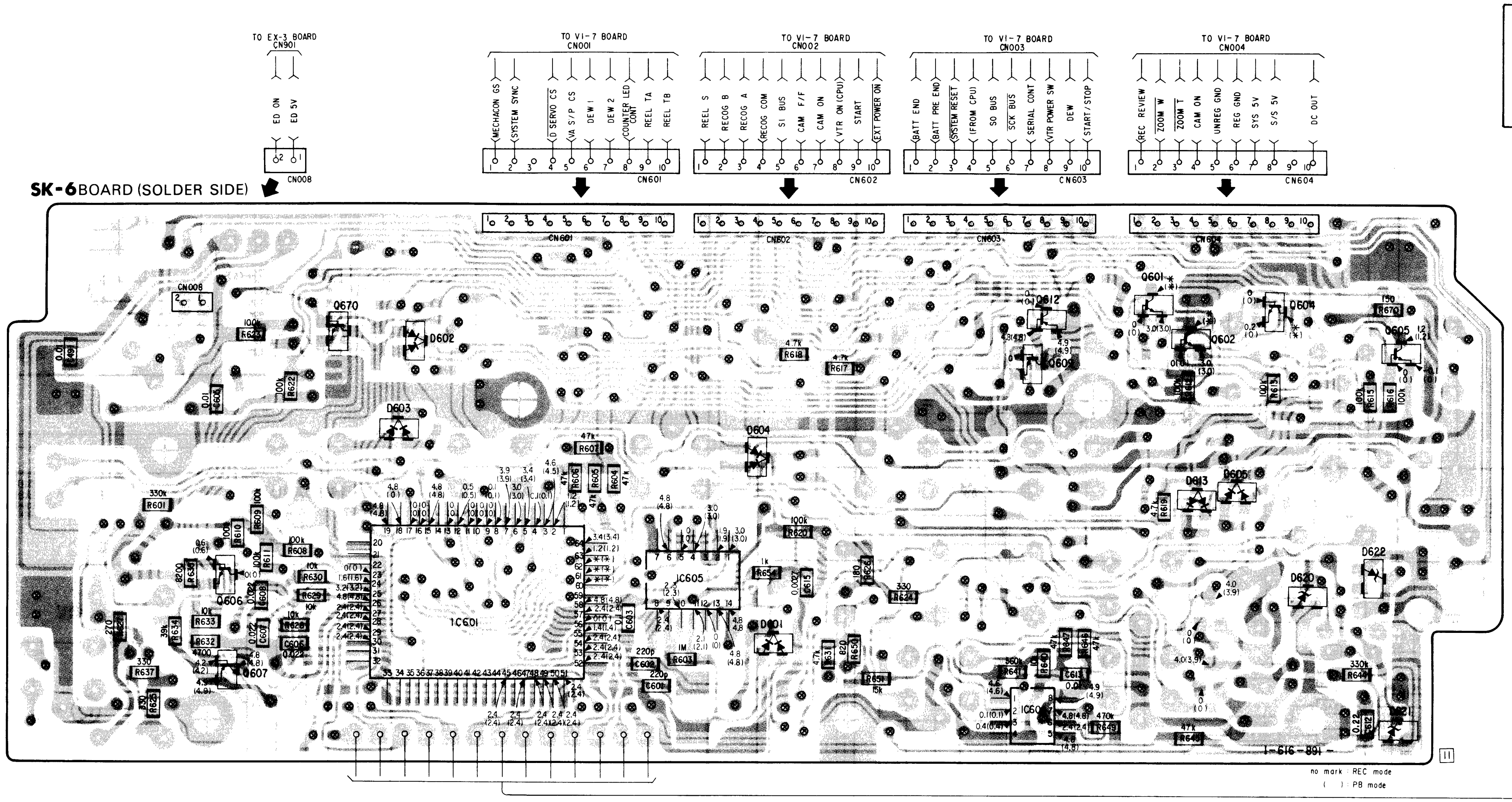
NTROL), DS-14 (POWER CONTROL/COMMUNICATION CONTROL C.P.U) PRINTED WIRING BOARDS

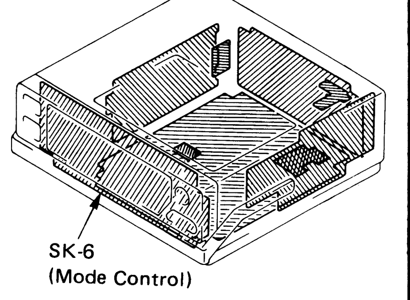
RD : 5000 series, DS-14 BOARD : 7000 series –

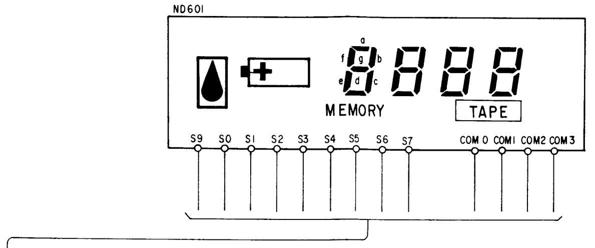
Caution:

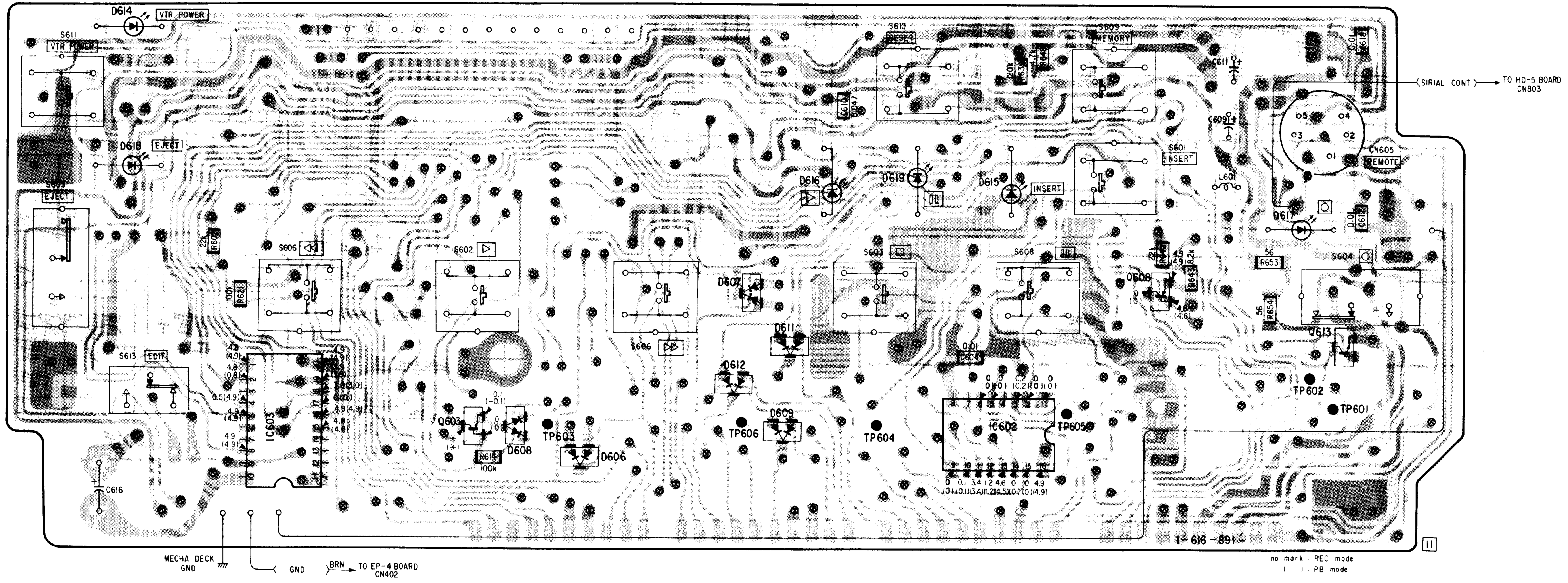
Pattern face side: (Solder Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the pattern face are indicated.

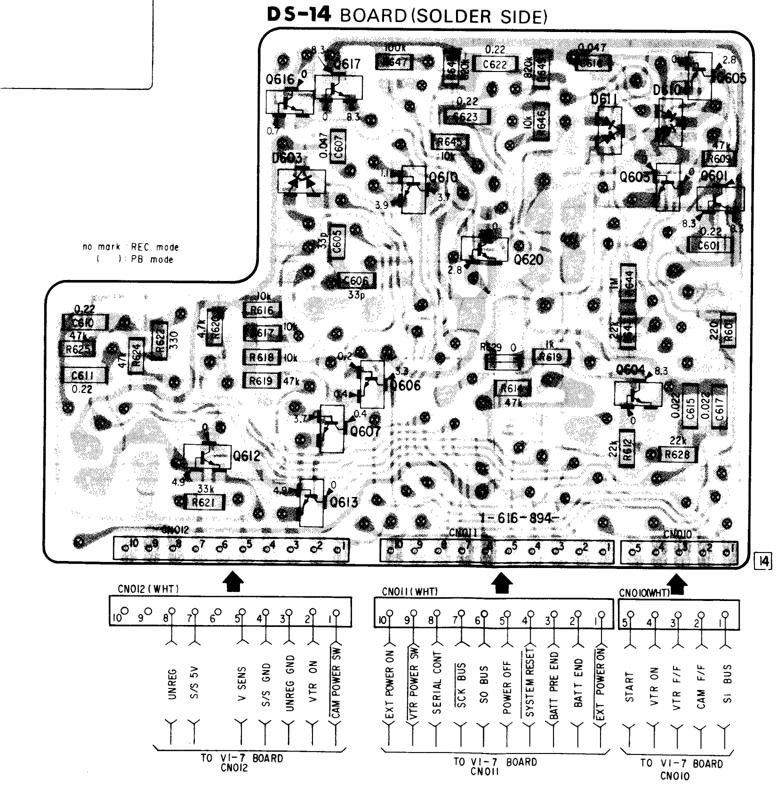
TP
04
605
22
21
19 15
7
602 601 605 09 606 604 603
TP


TO EX-3 BOARD CN901
ED ON
ED 5V
CN008
TO VI-7 BOARD CN001
MECHACON GS
SYSTEM SYNC
D SERVO CS
VA S/P CS
DEW 1
DEW 2
COUNTER LED CONT
REEL TA
REEL TB
CN601
TO VI-7 BOARD CN002
REEL S
RECOG B
RECOG A
RECOG COM
SI BUS
CAM F/F
CAM ON
VTR ON (CPU)
START
EXT POWER ON
CN602
TO VI-7 BOARD CN003
BATT END
BATT PRE END
SYSTEM RESET
(FROM CPU)
SO BUS
SCK BUS
SERIAL CONT
VTR POWER SW
DEW
START/STOP
CN603
TO VI-7 BOARD CN004
REC REVIEW
ZOOM W
ZOOM T
CAM ON
UNREG GND
REG GND
SYS 5V
S/S 5V
DC OUT
CN604
SK-6 BOARD (SOLDER SIDE)
IC601
IC605
IC604
1-616-891-
11
no mark : REC mode
( ) : PB mode

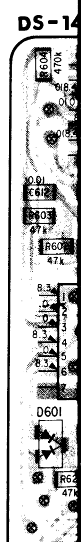

SK-6
(Mode Control)


ND601
MEMORY
TAPE
S9 S0 S1 S2 S3 S4 S5 S6 S7
COM 0 COM1 COM2 COM3

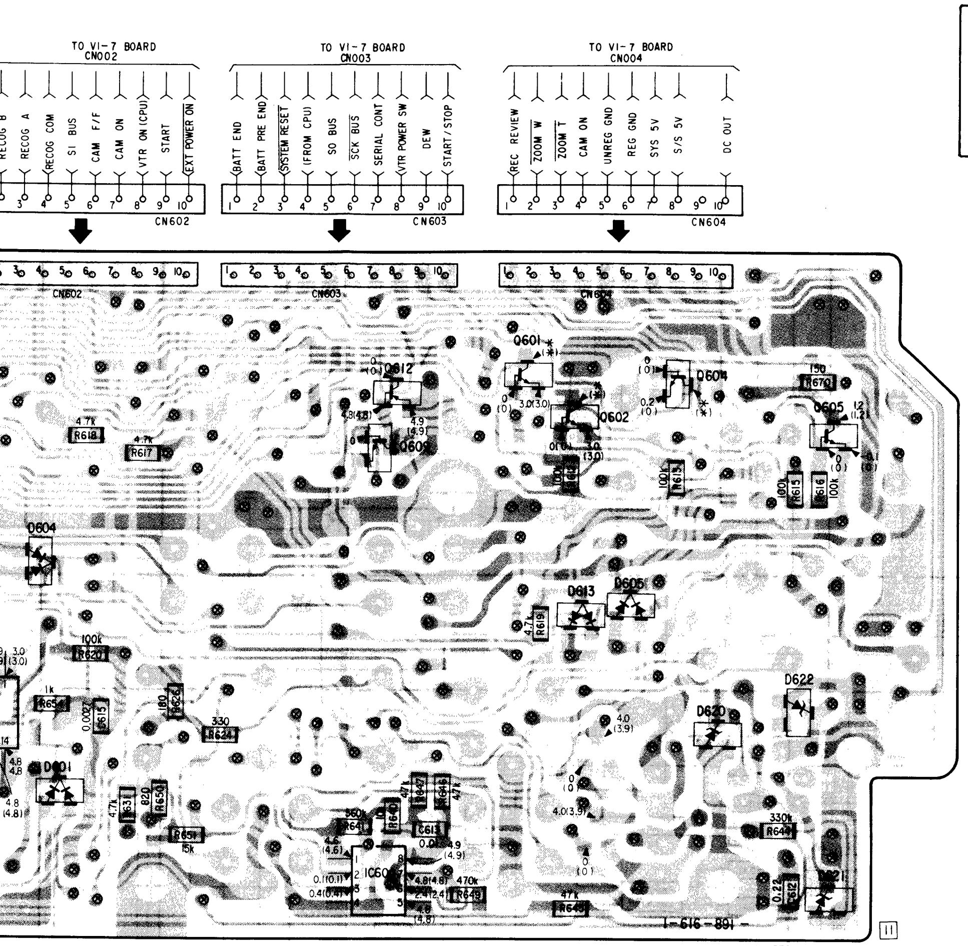

SK-6 BOARD (COMPONENT SIDE)
D614
VTR POWER
S611
D618
EJECT
S605
S613
EDIT
S606
S602
S603
S608
S604
S610
RESET
S609
MEMORY
S601
INSERT
D616
D619
D615
CN605
REMOTE
SIRIAL CONT
TO HD-5 BOARD CN803
IC603
IC602
TP601
TP602
TP603
TP604
TP605
TP606
C616
MECHA DECK GND
GND
BRN
TO EP-4 BOARD CN402
1-616-891-
11
no mark : REC mode
( ) : PB mode

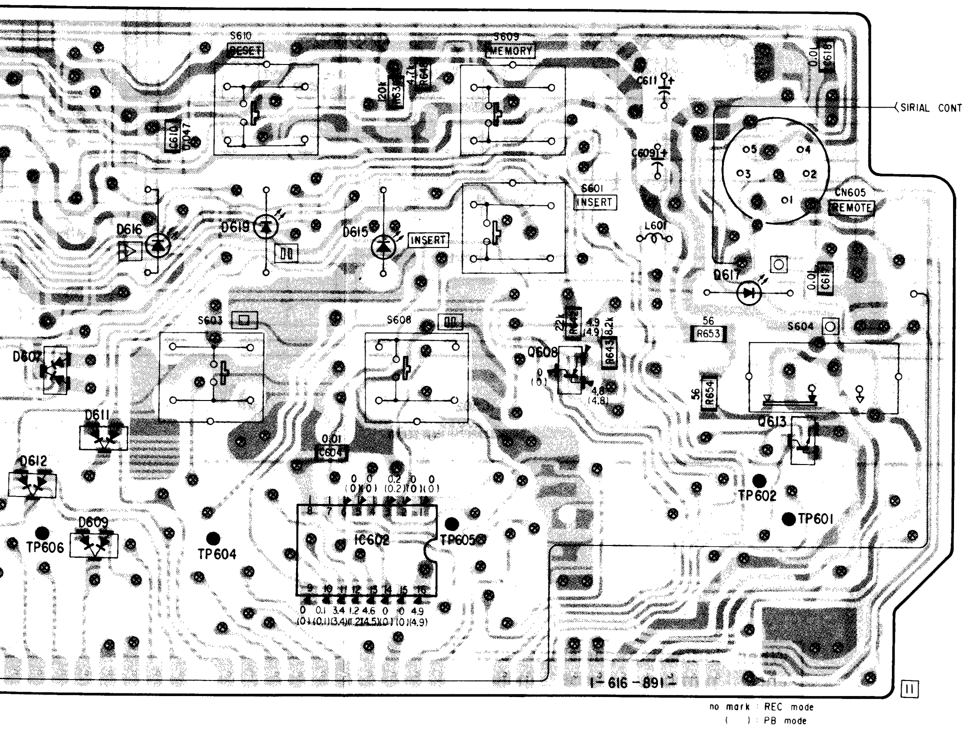

DS-14 BOARD (SOLDER SIDE)
no mark : REC mode
( ) : PB mode
1-616-894-
14
CN012 (WHT)
UNREG
S/S 5V
V SENS
S/S GND
UNREG GND
VTR ON
CAM POWER SW
TO VI-7 BOARD CN012
CN011 (WHT)
EXT POWER ON
VTR POWER SW
SERIAL CONT
SCK BUS
SO BUS
POWER OFF
SYSTEM RESET
BATT PRE END
BATT END
EXT POWER ON
TO VI-7 BOARD CN011
CN010 (WHT)
START
VTR ON
VTR F/F
CAM F/F
SI BUS
TO VI-7 BOARD CN010

Q , IC	D
605 618 616, 617 IC602, IC605	611, 610
610 603 601 619 IC603	603
620	
608 609 IC601 IC604	
606 604 607	605, 604
	601 606
612 611	
613	
Q , IC	D



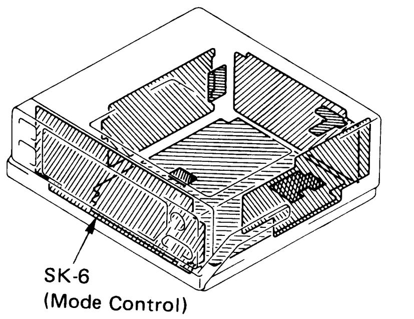
WIRING BOARDS

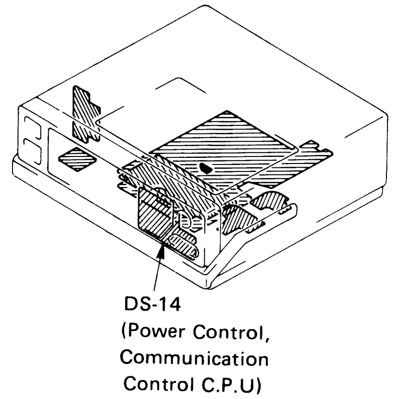

TO VI-7 BOARD CN002
RECOG B
RECOG A
RECOG COM
SI BUS
CAM F/F
CAM ON
VTR ON (CPU)
START
EXT POWER ON
CN602
TO VI-7 BOARD CN003
BATT END
BATT PRE END
SYSTEM RESET
(FROM CPU)
SO BUS
SCK BUS
SERIAL CONT
VTR POWER SW
DEW
START/STOP
CN603
TO VI-7 BOARD CN004
REC REVIEW
ZOOM W
ZOOM T
CAM ON
UNREG GND
REG GND
SYS 5V
S/S 5V
DC OUT
CN604
1-616-891-
no mark : REC mode
( ) : PB mode

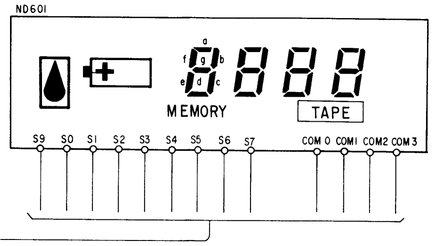

S610 RESET
S609 MEMORY
S601 INSERT
INSERT
SIRIAL CONT
TO HD-5 BOARD CN803
CN605 REMOTE
S603
S608
S604
TP602
TP601
TP606
TP604
TP605
IC602
1-616-891-
no mark : REC mode
( ) : PB mode

Caution:

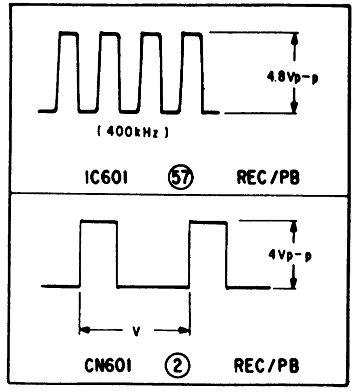
Pattern face side: (Solder Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the pattern face are indicated.


SK-6
(Mode Control)

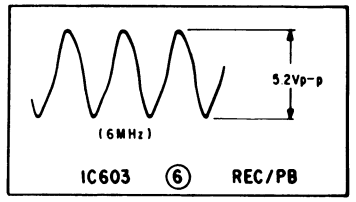

DS-14
(Power Control,
Communication
Control C.P.U)


ND601
MEMORY
TAPE
S9 S0 S1 S2 S3 S4 S5 S6 S7
COM 0 COM1 COM2 COM3

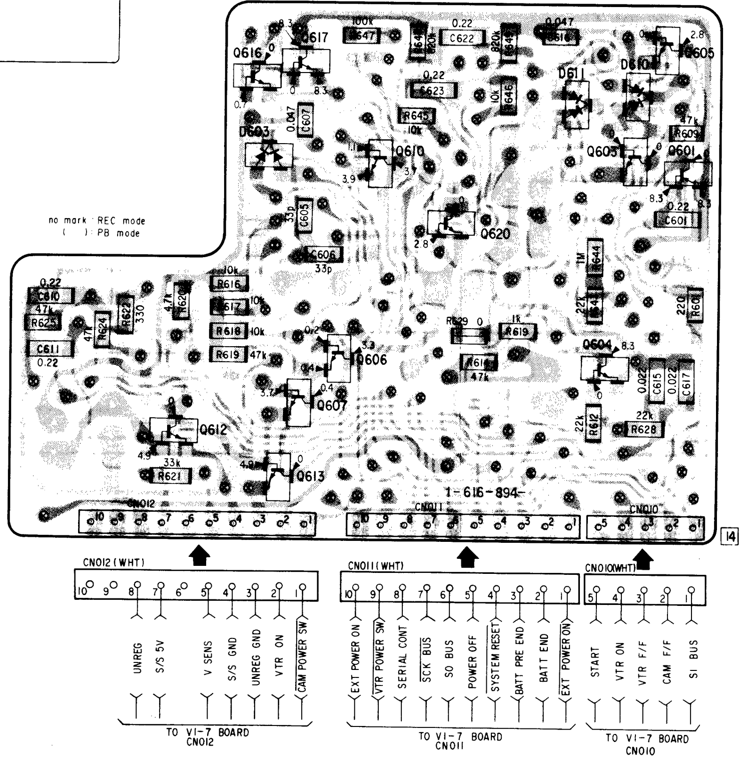
SK-6 BOARD (MODE CONTROL)


4.8Vp-p
(400kHz)
IC601 (57) REC/PB
4Vp-p
V
CN601 ② REC/PB

DS-14 BOARD

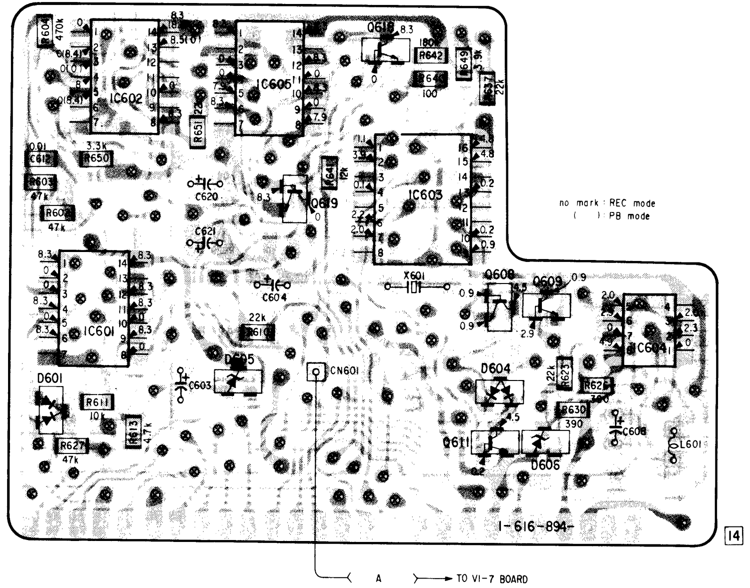

5.2Vp-p
(6MHz)
IC603 ⑥ REC/PB

DS-14 BOARD (SOLDER SIDE)


no mark : REC mode
( ) : PB mode
1-616-894-
CN012 (WHT)
CN011 (WHT)
CN010 (WHT)
UNREG
S/S 5V
V SENS
S/S GND
UNREG GND
VTR ON
CAM POWER SW
TO VI-7 BOARD CN012
EXT POWER ON
VTR POWER SW
SERIAL CONT
SCK BUS
SO BUS
POWER OFF
SYSTEM RESET
BATT PRE END
BATT END
EXT POWER ON
TO VI-7 BOARD CN011
START
VTR ON
CAM F/F
CAM ON
SI BUS
TO VI-7 BOARD CN010

Q, IC	D
605 618 616, 617 IC602, IC605	611, 610
610 603 601 619 IC603	603
620	
608 609 IC601 IC604	
606 604 607	605, 604
612 611	601 606
613	
Q, IC	D

DS-14 BOARD (COMPONENT SIDE)


IC602
IC605
IC603
IC601
IC604
CN601
X601
1-616-894-
no mark : REC mode
( ) : PB mode
A
TO VI-7 BOARD

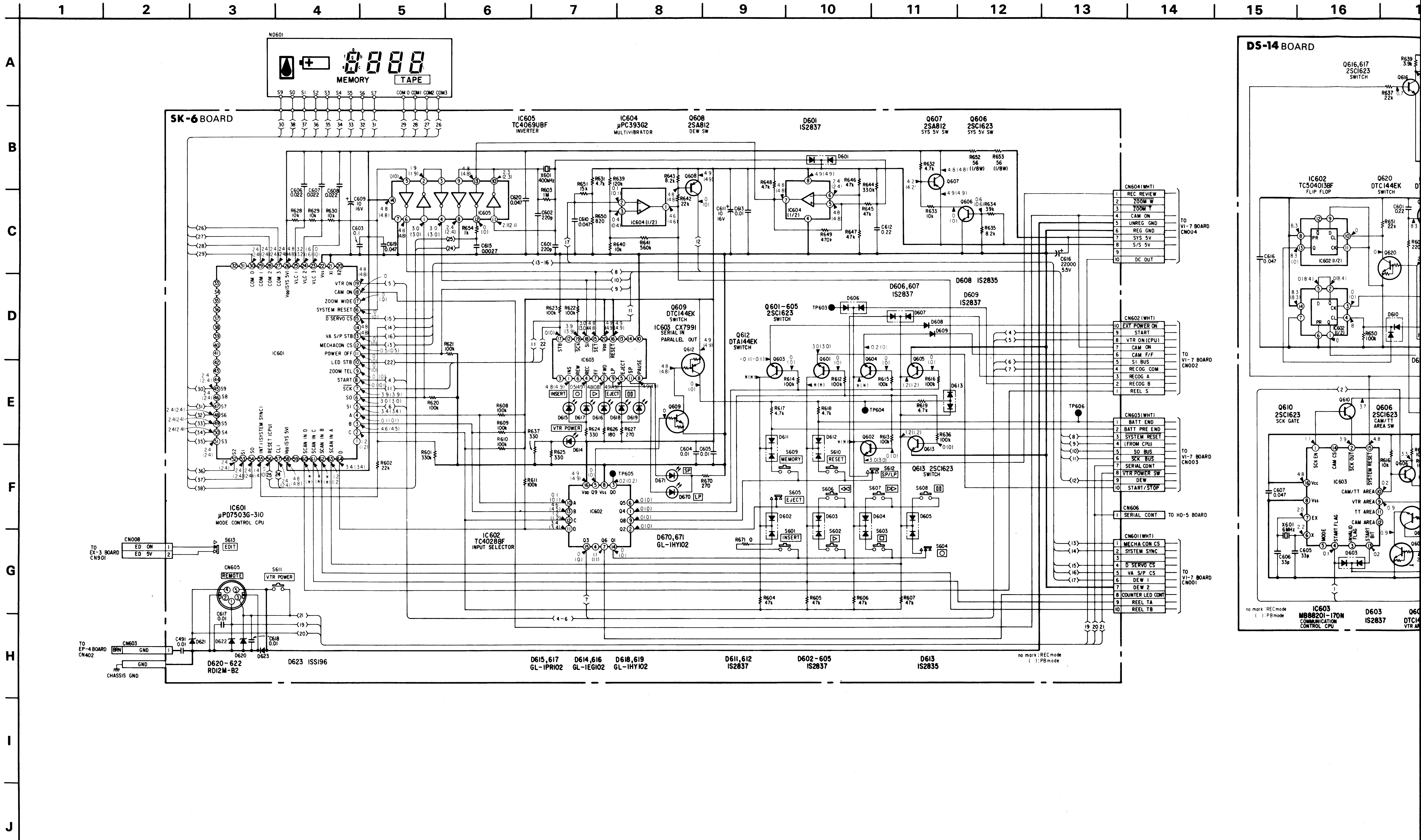
Note:

- ⊗ : Through hole.
- ▨ : pattern from the side which enables seeing.
- ▨ : B+ pattern from the side which enables seeing.
- ▨ : patter of the rear side.

When indicating parts by reference number, please include the board name.

SK-6 (MODE CONTROL), DS-14 (POWER CONTROL/COMMUNICATION CONTROL C.P.U) SCHEMATIC DIAGRAM

– Ref. No. SK-6 BOARD : 5000 series, DS-14 BOARD : 7000 series –


1
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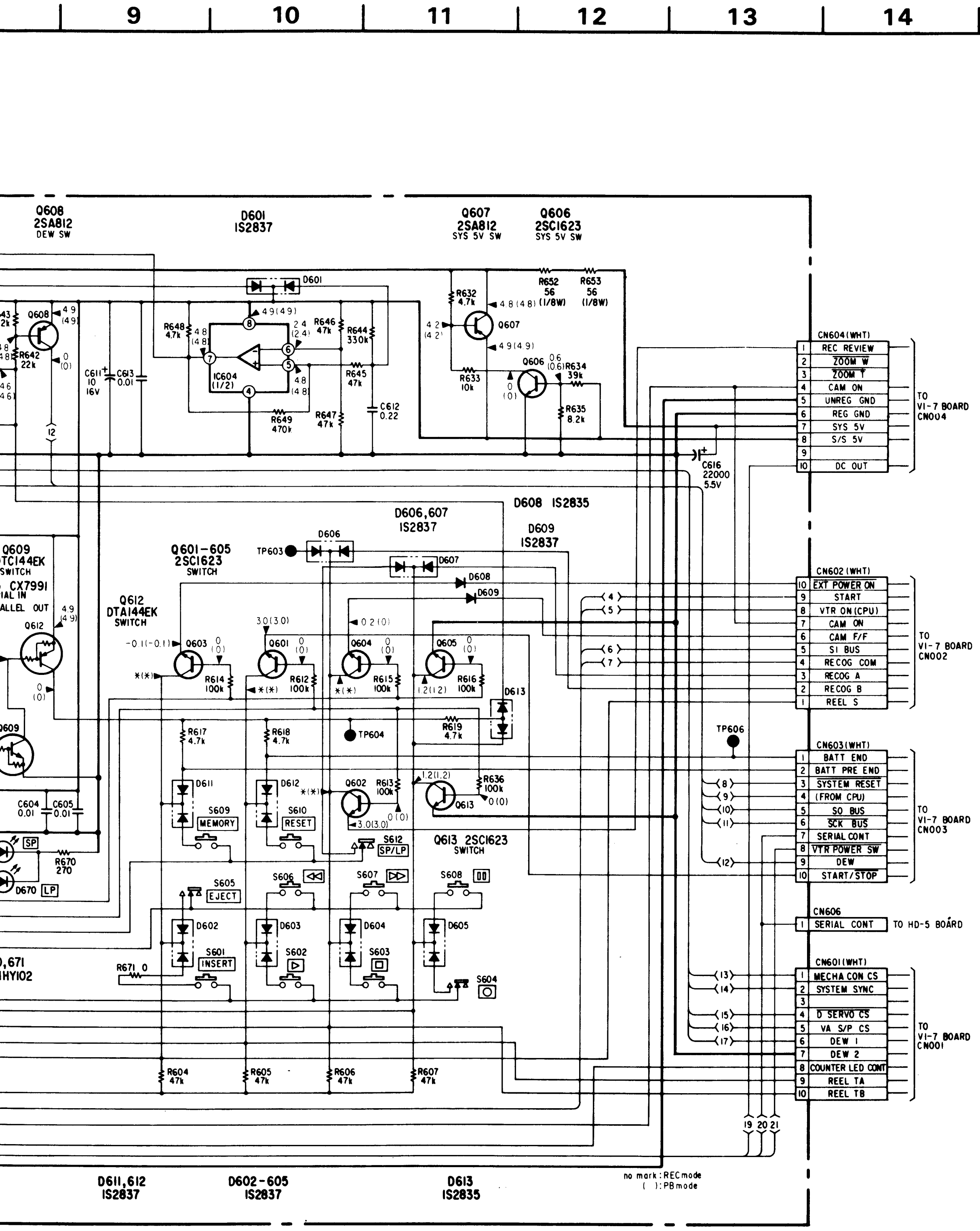
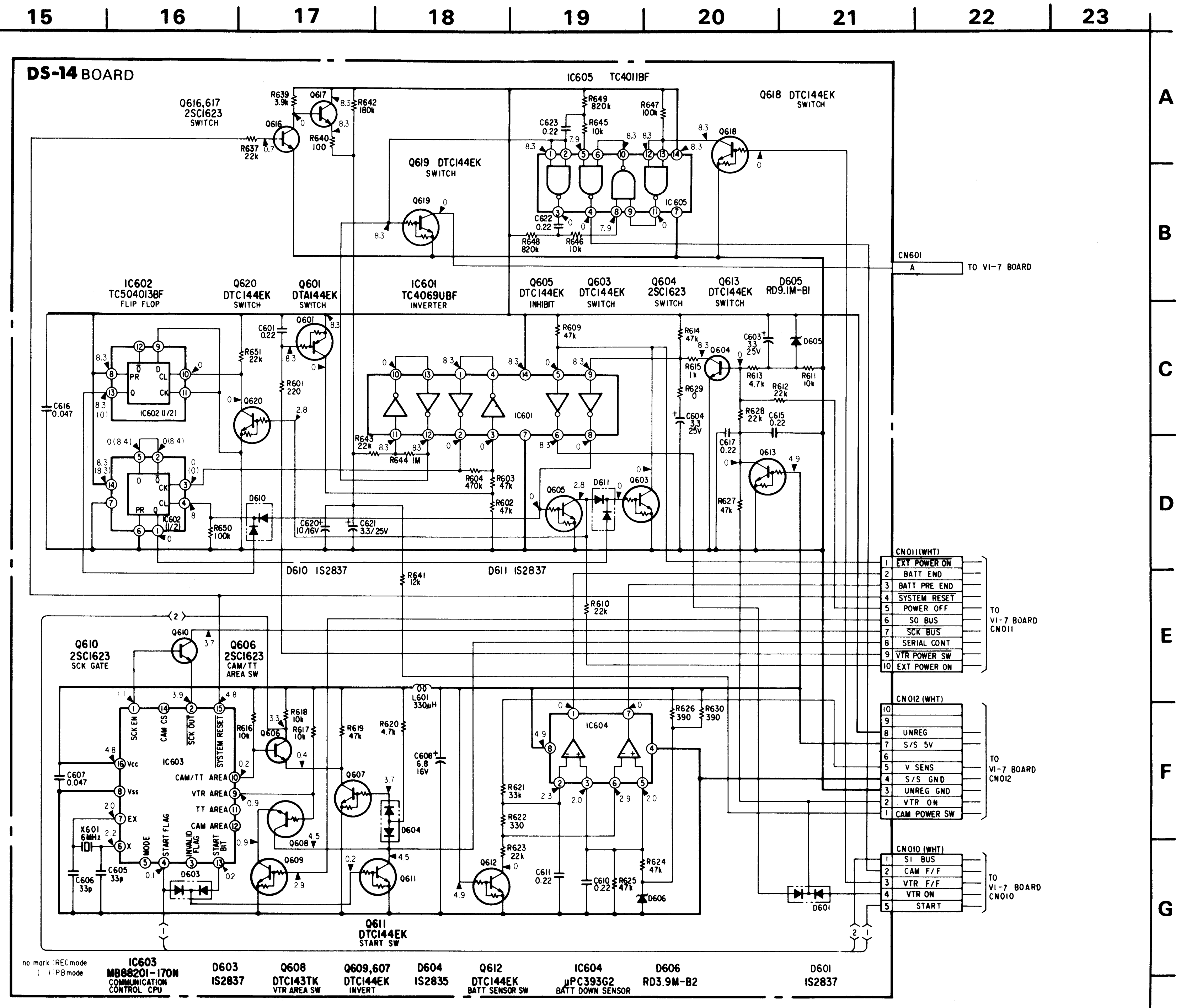
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
ND601
MEMORY
TAPE
SK-6 BOARD
DS-14 BOARD
IC605 TC4069UBF INVERTER
IC604 μPC393G2 MULTIVIBRATOR
Q608 2SA812 DEW SW
D601 IS2837
Q607 2SA812 SYS 5V SW
Q606 2SC1623 SYS 5V SW
IC601 μPD7503G-310 MODE CONTROL CPU
IC603 CX7991 SERIAL IN PARALLEL OUT
Q609 DTC144EK SWITCH
Q612 DTA144EK SWITCH
Q601-605 2SC1623 SWITCH
D606,607 IS2837
D608 IS2835
D609 IS2837
Q613 2SC1623 SWITCH
IC602 TC4028BF INPUT SELECTOR
D670,671 GL-1HY102
X601 400kHz
CN604(WHT)
REC REVIEW
ZOOM W
ZOOM T
CAM ON
UNREG GND
REG GND
SYS 5V
S/S 5V
DC OUT
TO VI-7 BOARD CN004
CN602(WHT)
EXT POWER ON
START
VTR ON(CPU)
CAM ON
CAM F/F
SI BUS
RECOG COM
RECOG A
RECOG B
REEL S
TO VI-7 BOARD CN002
CN603(WHT)
BATT END
BATT PRE END
SYSTEM RESET
(FROM CPU)
SO BUS
SCK BUS
SERIAL CONT
VTR POWER SW
DEW
START/STOP
TO VI-7 BOARD CN003
CN606
SERIAL CONT
TO HD-5 BOARD
CN601(WHT)
MECHA CON CS
SYSTEM SYNC
D SERVO CS
VA S/P CS
DEW 1
DEW 2
COUNTER LED CONT
REEL TA
REEL TB
TO VI-7 BOARD CN001
VTR ON
CAM ON
ZOOM WIDE
SYSTEM RESET
D SERVO CS
VA S/P STB
MECHACON CS
POWER OFF
LED STB
ZOOM TEL
START
SCK
SO
SI
INSERT
EJECT
SP
LP
S609 MEMORY
S610 RESET
S605 EJECT
S601 INSERT
S612 SP/LP
VTR POWER
TP603
TP604
TP605
TP606
TO EX-3 BOARD CN901
CN008
ED ON
ED 5V
S613 EDIT
CN605 REMOTE
S611 VTR POWER
TO EP-4 BOARD CN402
CN603
GND
CHASSIS GND
C616 22000 5.5V
D620-622 RD12M-B2
D623 ISS196
D615,617 GL-1PR102
D614,616 GL-1EG102
D618,619 GL-1HY102
D611,612 IS2837
D602-605 IS2837
D613 IS2835
no mark: REC mode ( ): PB mode
Q616,617 2SC1623 SWITCH
IC602 TC5040138F FLIP FLOP
Q620 DTC144EK SWITCH
Q610 2SC1623 SCK GATE
Q606 2SC1623 CAM/TT AREA SW
IC603 MB88201-170N COMMUNICATION CONTROL CPU
D603 IS2837
X601 6MHz
CAM/TT AREA
VTR AREA
TT AREA
CAM AREA


9
10
11
12
13
14
Q608 2SA812 DEW SW
D601 IS2837
Q607 2SA812 SYS 5V SW
Q606 2SC1623 SYS 5V SW
IC604 (1/2)
C616 22000 5.5V
CN604 (WHT)
1 REC REVIEW
2 ZOOM W
3 ZOOM T
4 CAM ON
5 UNREG GND
6 REG GND
7 SYS 5V
8 S/S 5V
9
10 DC OUT
TO VI-7 BOARD CN004
D606,607 IS2837
D608 IS2835
D609 IS2837
Q601-605 2SC1623 SWITCH
Q612 DTA144EK SWITCH
Q609 DTC144EK SWITCH
CX7991
TP603
TP604
TP606
CN602 (WHT)
10 EXT POWER ON
9 START
8 VTR ON (CPU)
7 CAM ON
6 CAM F/F
5 SI BUS
4 RECOG COM
3 RECOG A
2 RECOG B
1 REEL S
TO VI-7 BOARD CN002
S609 MEMORY
S610 RESET
S612 SP/LP
Q613 2SC1623 SWITCH
CN603 (WHT)
1 BATT END
2 BATT PRE END
3 SYSTEM RESET
4 (FROM CPU)
5 SO BUS
6 SCK BUS
7 SERIAL CONT
8 VTR POWER SW
9 DEW
10 START/STOP
TO VI-7 BOARD CN003
S605 EJECT
S606
S607
S608
CN606
1 SERIAL CONT
TO HD-5 BOARD
S601 INSERT
S602
S603
S604
D602
D603
D604
D605
CN601 (WHT)
1 MECHA CON CS
2 SYSTEM SYNC
3
4 D SERVO CS
5 VA S/P CS
6 DEW 1
7 DEW 2
8 COUNTER LED CONT
9 REEL TA
10 REEL TB
TO VI-7 BOARD CN001
R604 47k
R605 47k
R606 47k
R607 47k
D611,612 IS2837
D602-605 IS2837
D613 IS2835
no mark : REC mode
( ) : PB mode


15
16
17
18
19
20
21
22
23
A
B
C
D
E
F
G
DS-14 BOARD
IC605 TC4011BF
Q616,617 2SC1623 SWITCH
Q618 DTC144EK SWITCH
Q619 DTC144EK SWITCH
CN601
TO VI-7 BOARD
IC602 TC5040I3BF FLIP FLOP
Q620 DTC144EK SWITCH
Q601 DTA144EK SWITCH
IC601 TC4069UBF INVERTER
Q605 DTC144EK INHIBIT
Q603 DTC144EK SWITCH
Q604 2SC1623 SWITCH
Q613 DTC144EK SWITCH
D605 RD9.1M-B1
D610 IS2837
D611 IS2837
CN011 (WHT)
1 EXT POWER ON
2 BATT END
3 BATT PRE END
4 SYSTEM RESET
5 POWER OFF
6 SO BUS
7 SCK BUS
8 SERIAL CONT
9 VTR POWER SW
10 EXT POWER ON
TO VI-7 BOARD CN011
Q610 2SC1623 SCK GATE
Q606 2SC1623 CAM/TT AREA SW
IC603
IC604
X601 6MHz
L601 330μH
CN012 (WHT)
10
9
8 UNREG
7 S/S 5V
6
5 V SENS
4 S/S GND
3 UNREG GND
2 VTR ON
1 CAM POWER SW
TO VI-7 BOARD CN012
CN010 (WHT)
1 SI BUS
2 CAM F/F
3 VTR F/F
4 VTR ON
5 START
TO VI-7 BOARD CN010
Q611 DTC144EK START SW
no mark : REC mode
( ) : PB mode
IC603 MB88201-170N COMMUNICATION CONTROL CPU
D603 IS2837
Q608 DTC143TK VTR AREA SW
Q609,607 DTC144EK INVERT
D604 IS2835
Q612 DTC144EK BATT SENSOR SW
IC604 μPC393G2 BATT DOWN SENSOR
D606 RD3.9M-B2
D601 IS2837

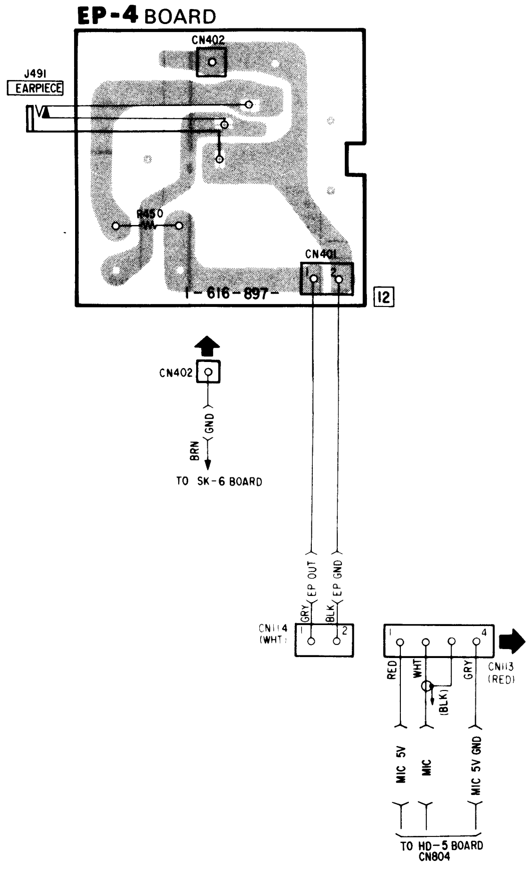
Note:

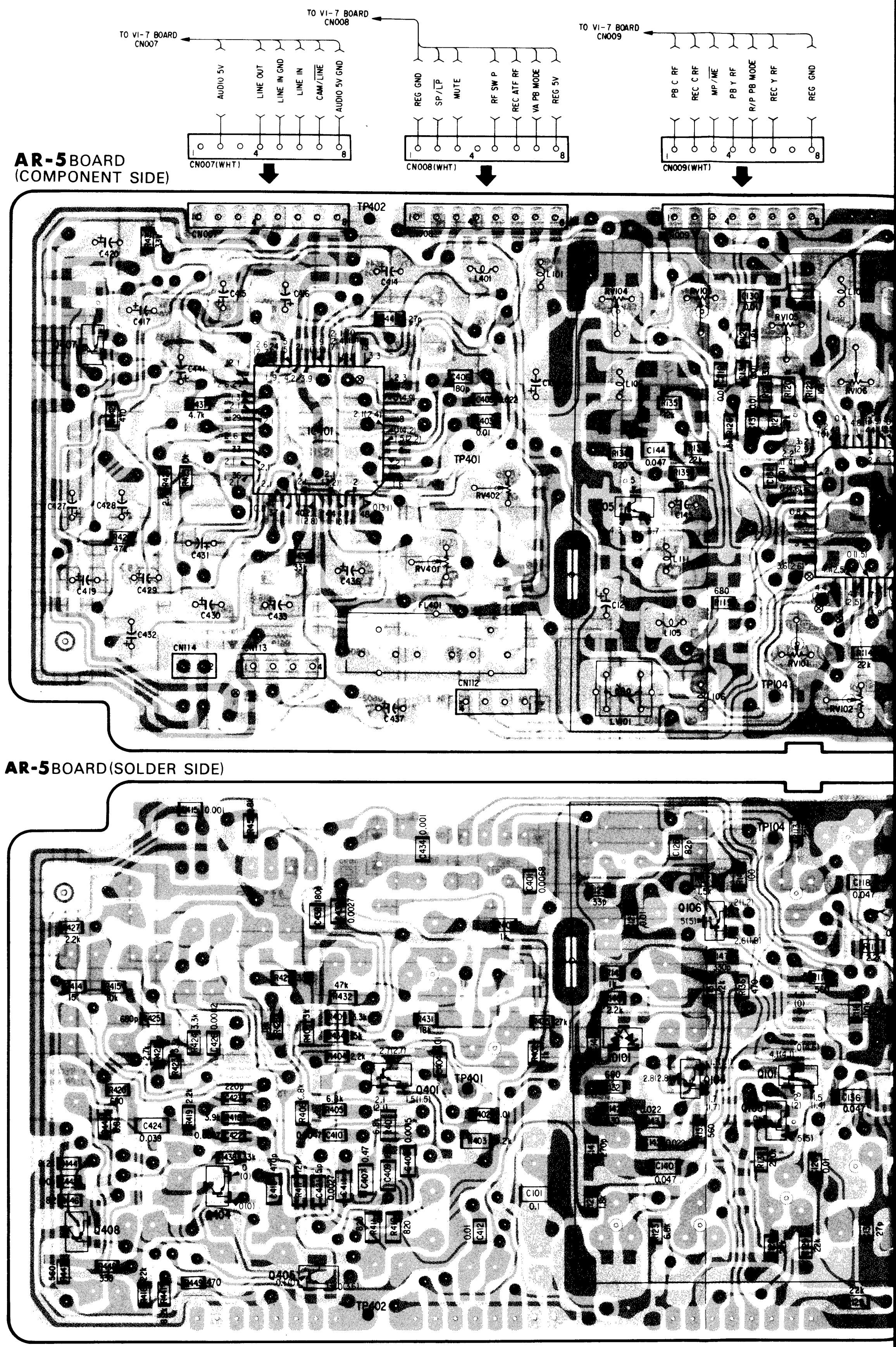
- All resistors are in ohms, 1/10W unless otherwise noted.
- All capacitors are in μF (p:pF) unless otherwise noted. 50V or less are not indicated except for electrolytic capacitors.
- All variable and semi fixed resistors have characteristic curve B, unless otherwise noted.
- ☐ : panel designation.
- ▨ : Nonflammable resistor
- — : B+ bus.
- ☐ : adjustment for repair.
- Voltage and waveform measuring conditions: The reference value against ground when recieving the video signal from the pattern generator through AC-V8.
- The voltage value is measured using DC digital multi-meter (impedance 10M-ohm or more).

When indicating parts by reference number, please include the board name.

AR-5 (AUDIO SIGNAL PROCESS/PB PROCESS), EP-4 (EARPIECE OUTPUT) PRINTED WIRING BOARDS

– Ref. No. AR-5, EP-4 BOARDS : 5000 series –


EP-4 BOARD
CN402
J491
EARPIECE
R450
CN401
1 2
1-616-897-
12
CN402
GND
BRN
TO SK-6 BOARD
EP OUT
EP GND
GRY
BLK
CN114
(WHT)
1 2
1 4
RED
WHT
(BLK)
GRY
CN113
(RED)
MIC 5V
MIC
MIC 5V GND
TO HD-5 BOARD
CN804


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
TO VI-7 BOARD
CN007
AUDIO 5V
LINE OUT
LINE IN GND
LINE IN
CAM/LINE
AUDIO 5V GND
CN007(WHT)
TO VI-7 BOARD
CN008
REG GND
SP/LP
MUTE
RF SW P
REC ATF RF
VA PB MODE
REG 5V
CN008(WHT)
TO VI-7 BOARD
CN009
PB C RF
REC C RF
MP/ME
PB Y RF
R/P PB MODE
REC Y RF
REG GND
CN009(WHT)
AR-5 BOARD
(COMPONENT SIDE)
TP402
C420
C417
C414
C415
C416
L401
L101
IC401
TP401
RV402
RV401
C427
C428
C419
C429
C431
C430
C433
C434
C452
FL401
CN114
CN113
CN112
C437
L102
L105
L106
L401
RV104
RV105
RV103
RV106
RV101
RV102
C144
C112
TP104
AR-5 BOARD (SOLDER SIDE)
TP104
Q106
C118
Q401
TP401
Q101
C140
C101
C424
C412
Q408
Q405
TP402
C434
C410

Note:

- ⊗ : Through hole.
- ▨ : pattern from the side which enables seeing.
- ▨ : B+ pattern from the side which enables seeing.
- ▨ : patter of the rear side.

Caution:

Pattern face side: (Solder Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the pattern face are indicated.

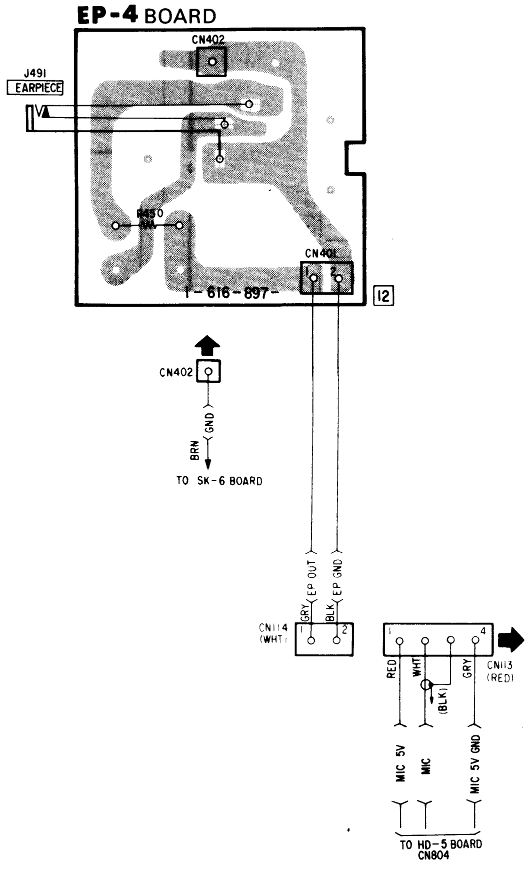
When indicating parts by reference number, please include the board name.

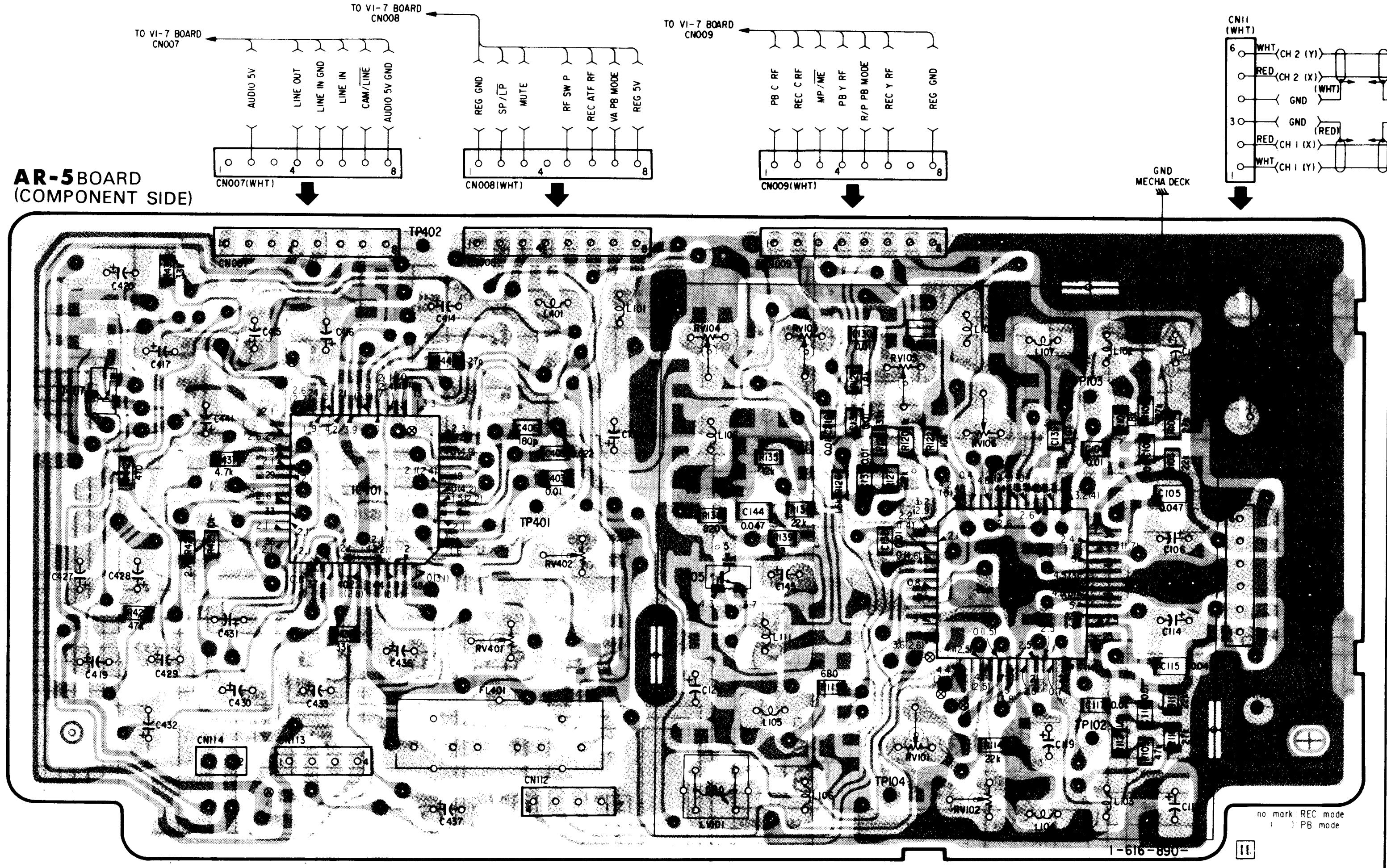
OCESS/PB PROCESS), EP-4 (EARPIECE OUTPUT) PRINTED WIRING BOARDS

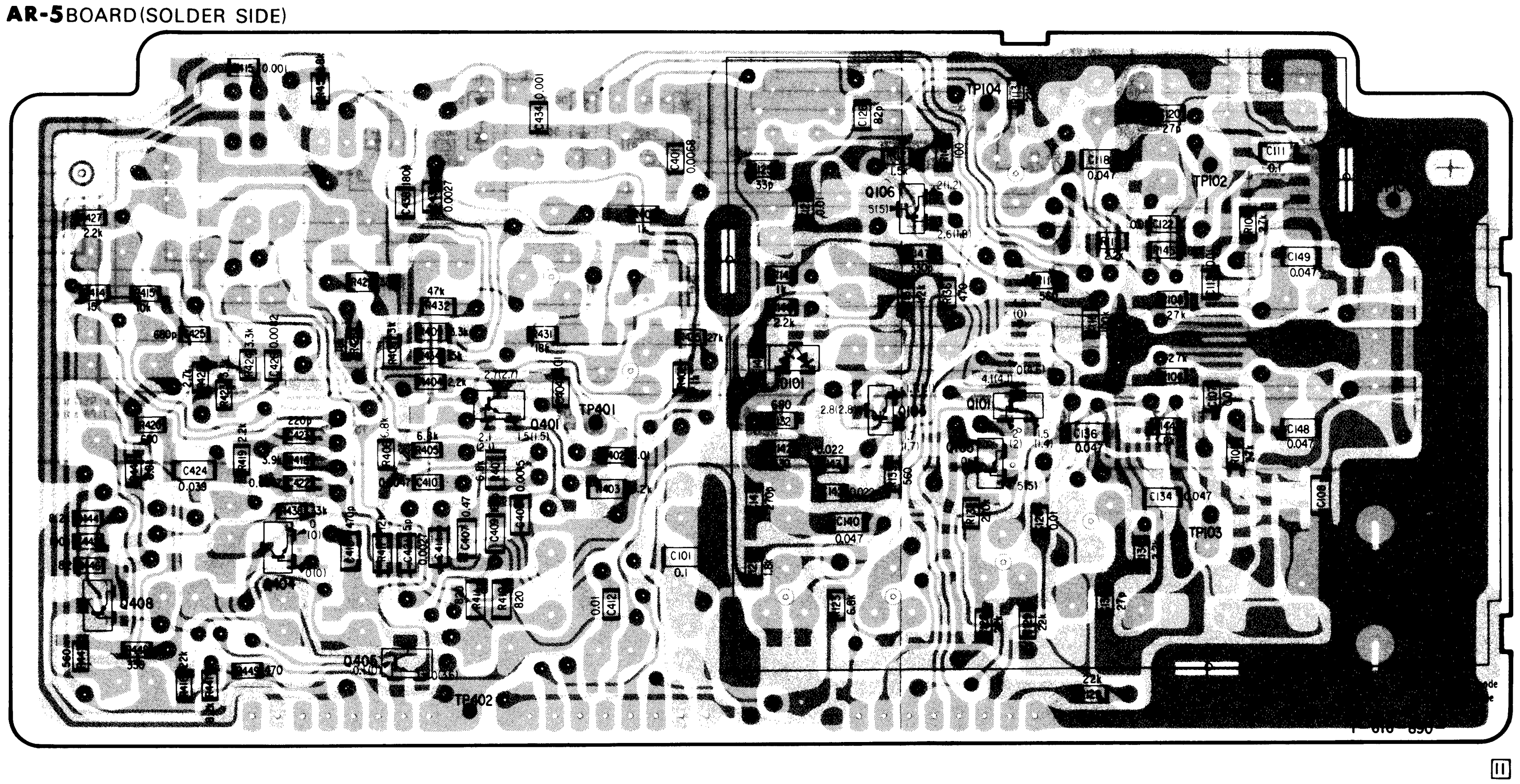
: 5000 series –

3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

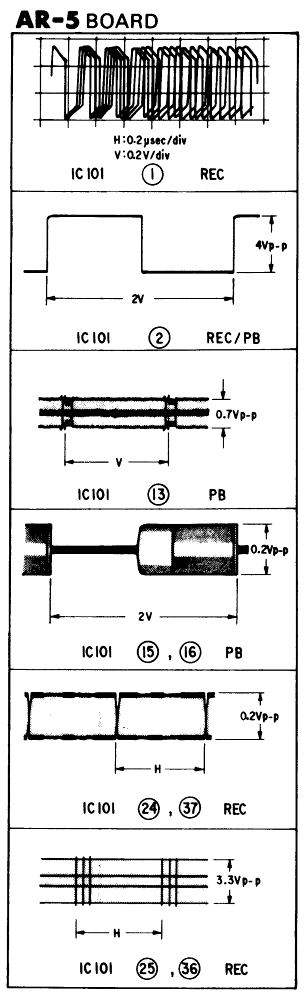
A B C D E F G H I J


EP-4 BOARD
CN402
J491
EARPIECE
R450
CN401
1 2
1-616-897-
12
CN402
GND
BRN
TO SK-6 BOARD
GRY
EP OUT
BLK
EP GND
CN114
(WHT)
1 2
1 4
RED
WHT
(BLK)
GRY
CN113
(RED)
MIC 5V
MIC
MIC 5V GND
TO HD-5 BOARD
CN804

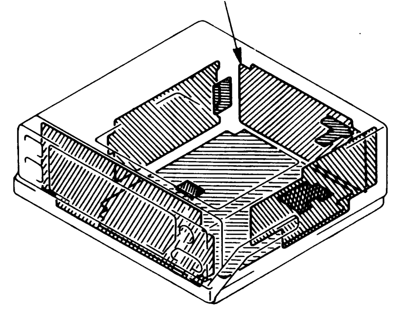

TO VI-7 BOARD
CN007
AUDIO 5V
LINE OUT
LINE IN GND
LINE IN
CAM/LINE
AUDIO 5V GND
CN007(WHT)
TO VI-7 BOARD
CN008
REG GND
SP/LP
MUTE
RF SW P
REC ATF RF
VA PB MODE
REG 5V
CN008(WHT)
TO VI-7 BOARD
CN009
PB C RF
REC C RF
MP/ME
PB Y RF
R/P PB MODE
REC Y RF
REG GND
CN009(WHT)
GND
MECHA DECK
CN11
(WHT)
6
3
1
WHT
RED
(CH 2 (Y))
(CH 2 (X))
(WHT)
GND
GND
(RED)
(CH 1 (X))
(CH 1 (Y))
DRUM MOTOR
CH 2
CH 1
AR-5 BOARD
(COMPONENT SIDE)
TP402
TP401
TP102
TP104
RV104
RV105
RV106
RV101
RV102
RV401
RV402
IC401
CN114
CN113
CN112
no mark : REC mode
( ) : PB mode
1-616-890-
11


AR-5 BOARD (SOLDER SIDE)
TP104
TP102
TP103
TP401
TP402
Q106
Q101
Q401
Q404
Q406
Q408
1-616-890
11

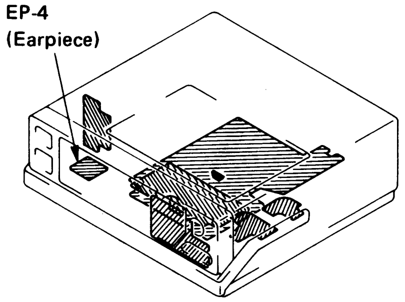
Q · IC	D	ADJ	TP
			402
		RV104,RV103	
		RV105	103
407			
		RV106	
IC401			
			401
		RV402	
105, IC101			
			101
			102
		RV101	
			104
		LV101, RV102	
			104
			102
			101
106			
	101		
401			
104, 101			401
103			
404			
408			
405			
			402
Q · IC	D	ADJ	TP



AR-5 (Video HEAD AMP, Audio)



EP-4
(Earpiece)



e.

m the side which enables seeing.

from the side which enables seeing.

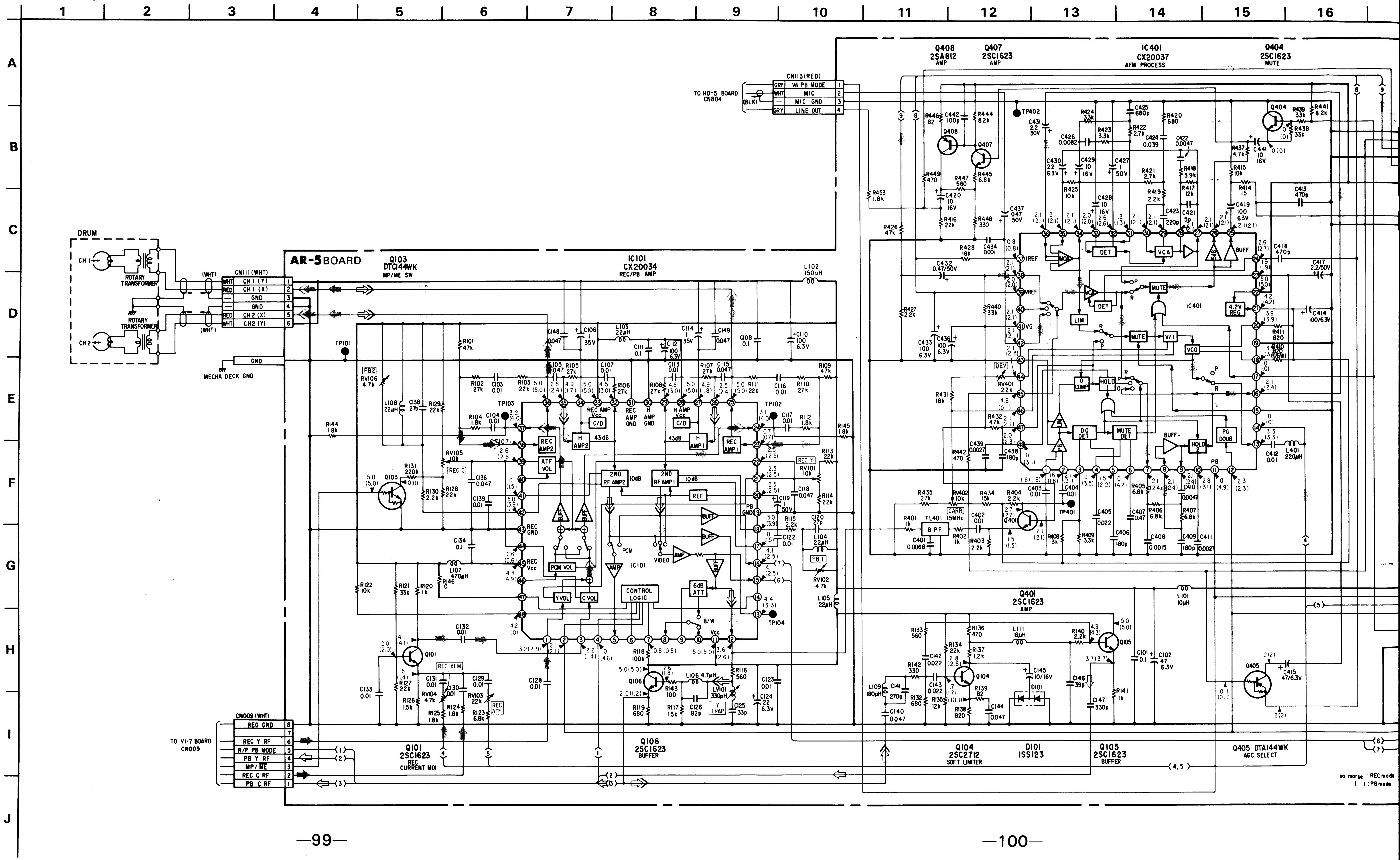
ne rear side.

arts on the pattern face side seen from
ne pattern face are indicated.
arts on the parts face side seen from
ne pattern face are indicated.

rts by refer-
ase include

AR-5 (AUDIO SIGNAL PROCESS/PB PROCESS), EP-4 (EARPIECE OUTPUT) SCHEMATIC DIAGRAM

– Ref. No. AR-5, EP-4 BOARDS : 5000 series –


1
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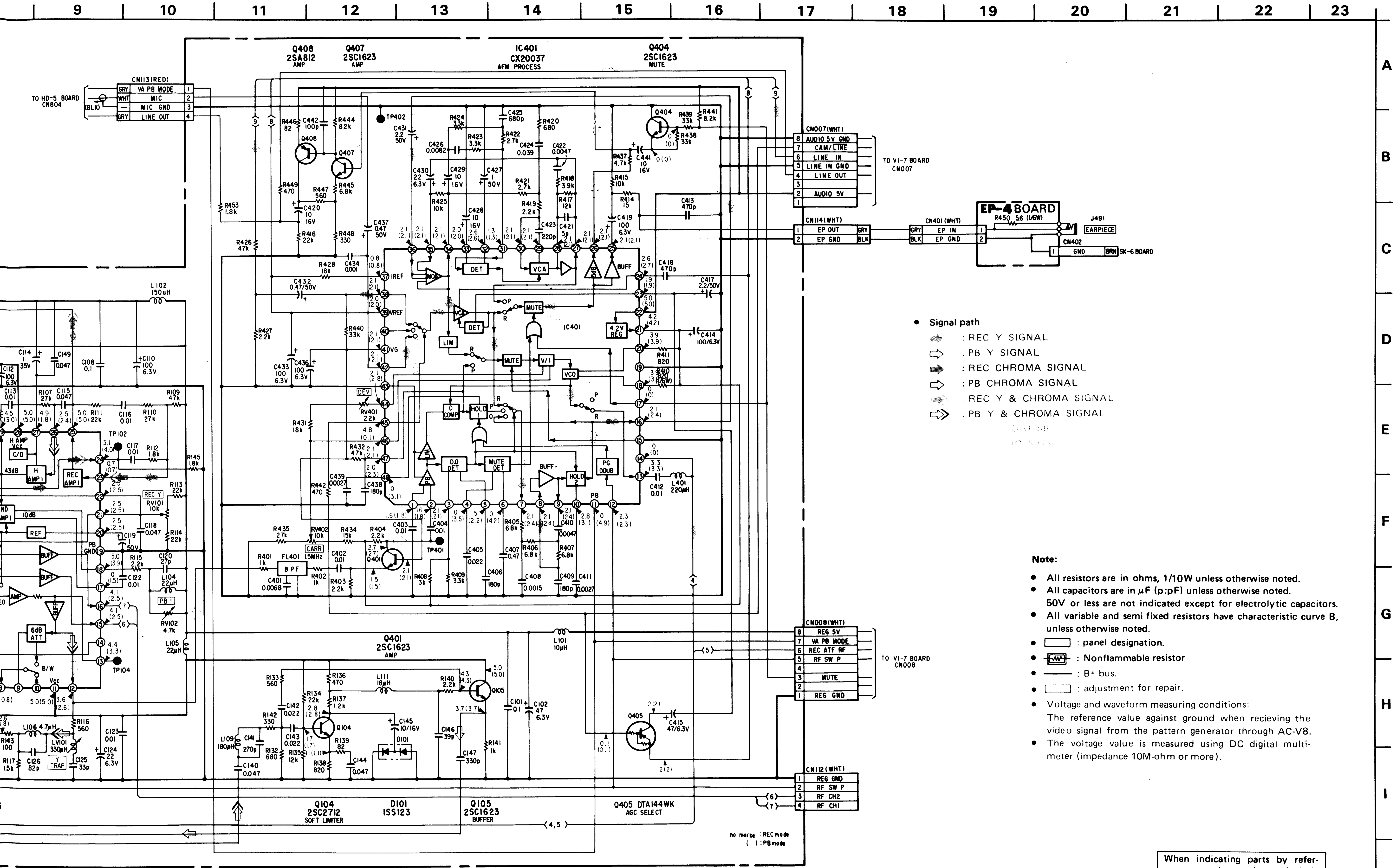
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
DRUM
CH1
CH2
ROTARY TRANSFORMER
ROTARY TRANSFORMER
(WHT)
CN111 (WHT)
WHT CH1 (Y) 1
RED CH1 (X) 2
— GND 3
— GND 4
RED CH2 (X) 5
WHT CH2 (Y) 6
GND
MECHA DECK GND
AR-5 BOARD
Q103 DTC144WK MP/ME SW
IC101 CX20034 REC/PB AMP
L102 150µH
TO HD-5 BOARD CN804
(BLK)
CN113 (RED)
GRY VA PB MODE 1
WHT MIC 2
— MIC GND 3
GRY LINE OUT 4
Q408 2SA812 AMP
Q407 2SC1623 AMP
IC401 CX20037 AFM PROCESS
Q404 2SC1623 MUTE
TP101
TP102
TP103
TP104
TP401
TP402
REC AMP2
REC AMP1
H AMP2
H AMP1
2ND RF AMP2
2ND RF AMP1
ATF VOL
PCM VOL
Y VOL
C VOL
CONTROL LOGIC
6dB ATT
REF
BUFF
AMP
PCM
VIDEO
B/W
REC GND
REC Vcc
PB GND
43dB
10dB
DET
VCA
MUTE
LIM
V/I
VCO
4.2V REG
COMP
HOLD
D.O DET
MUTE DET
HOLD 2
PG DOUB
B PF
FL401 1.5MHz
CARR
DEV
Q401 2SC1623 AMP
L101 10µH
Q101 2SC1623 REC CURRENT MIX
Q106 2SC1623 BUFFER
Q104 2SC2712 SOFT LIMITER
D101 1SS123
Q105 2SC1623 BUFFER
Q405 DTA144WK AGC SELECT
CN009 (WHT)
REG GND 8
7
REC Y RF 6
R/P PB MODE 5
PB Y RF 4
MP/ME 3
REC C RF 2
PB C RF 1
TO VI-7 BOARD CN009
REC C
REC Y
REC AFM
REC ATF
PB 2
PB 1
Y TRAP
no marks : REC mode
( ) : PB mode


9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
A
B
C
D
E
F
G
H
I
J
Q408
2SA812
AMP
Q407
2SC1623
AMP
IC401
CX20037
AFM PROCESS
Q404
2SC1623
MUTE
TO HD-5 BOARD
CN804
CN113(RED)
GRY VA PB MODE 1
WHT MIC 2
— MIC GND 3
GRY LINE OUT 4
(BLK)
CN007(WHT)
8 AUDIO 5V GND
7 CAM/LINE
6 LINE IN
5 LINE IN GND
4 LINE OUT
3
2 AUDIO 5V
1
TO VI-7 BOARD
CN007
CN114(WHT)
1 EP OUT GRY
2 EP GND BLK
CN401 (WHT)
GRY EP IN 1
BLK EP GND 2
EP-4 BOARD
R450 5.6 (1/6W)
J491
EARPIECE
CN402
1 GND BRN SK-6 BOARD
IREF
VREF
VG
DEV
RV401 22k
MOD
DET
VCA
LIM
MUTE
V/I
VCO
COMP
HOLD
D.O DET
MUTE DET
BUFF
HOLD 2
PG DOUB
4.2V REG
IC401
L102 150μH
L401 220μH
L101 10μH
CN008(WHT)
8 REG 5V
7 VA PB MODE
6 REC ATF RF
5 RF SW P
4
3 MUTE
2
1 REG GND
TO VI-7 BOARD
CN008
CN112(WHT)
1 REG GND
2 RF SW P
3 RF CH2
4 RF CH1
Q401
2SC1623
AMP
Q104
2SC2712
SOFT LIMITER
D101
1SS123
Q105
2SC1623
BUFFER
Q405 DTA144WK
AGC SELECT
TP401
TP402
TP102
TP104
H AMP
REC AMP1
REC Y
PB1
6dB ATT
Y TRAP
BPF
FL401
CARR 1.5MHz
no marke : REC mode
( ) : PB mode

- Signal path

▨	: REC Y SIGNAL
⇨	: PB Y SIGNAL
➡	: REC CHROMA SIGNAL
⇨	: PB CHROMA SIGNAL
▨	: REC Y & CHROMA SIGNAL
⇨	: PB Y & CHROMA SIGNAL

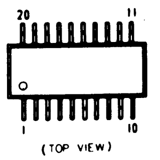
Note:

- All resistors are in ohms, 1/10W unless otherwise noted.
- All capacitors are in μF (p:pF) unless otherwise noted. 50V or less are not indicated except for electrolytic capacitors.
- All variable and semi fixed resistors have characteristic curve B, unless otherwise noted.
- ▭ : panel designation.
- ▭ : Nonflammable resistor
- ——— : B+ bus.
- ▭ : adjustment for repair.
- Voltage and waveform measuring conditions:
  The reference value against ground when recieving the video signal from the pattern generator through AC-V8.
- The voltage value is measured using DC digital multi-meter (impedance 10M-ohm or more).

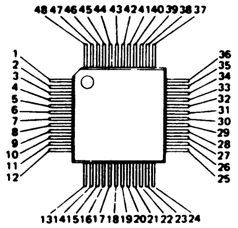
When indicating parts by reference number, please include the board name.

4-3. SEMICONDUCTORS

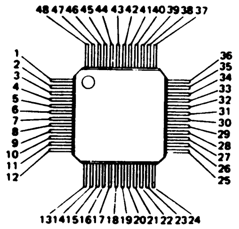
CX7991


20
11
1
10
(TOP VIEW)

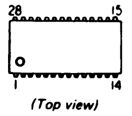
CX20030
CX20031
CX20032
CX23054
MB88505-342M


48 47 46 45 44 43 42 41 40 39 38 37
1 2 3 4 5 6 7 8 9 10 11 12
36 35 34 33 32 31 30 29 28 27 26 25
13 14 15 16 17 18 19 20 21 22 23 24

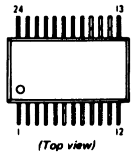
CX20034
CX20037A


48 47 46 45 44 43 42 41 40 39 38 37
1 2 3 4 5 6 7 8 9 10 11 12
36 35 34 33 32 31 30 29 28 27 26 25
13 14 15 16 17 18 19 20 21 22 23 24

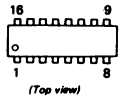
CX20035
CX20036
CX22022


28
15
1
14
(Top view)

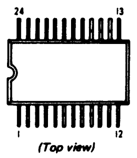
CX20114


24
13
1
12
(Top view)

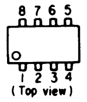
CX20115
CX22021


16
9
1
8
(Top view)

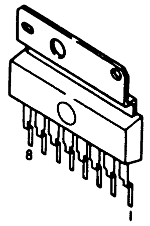
CX20117


24
13
1
12
(Top view)

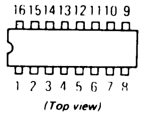
MB3763PF


8 7 6 5
1 2 3 4
(Top view)

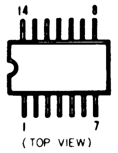
MB3763PS



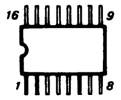
MB88201-170N
TC4526BF


16 15 14 13 12 11 10 9
1 2 3 4 5 6 7 8
(Top view)

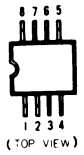
TC4011BF
TC4066BF
TC4069UBF
TC504013BF


14
8
1
7
(TOP VIEW)

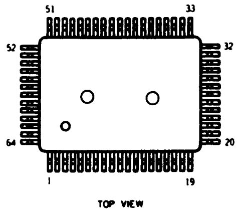
TC4028BF
TL1451CNS



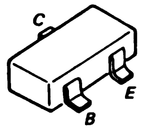
µPC358G2
µPC393G2


8 7 6 5
1 2 3 4
(TOP VIEW)

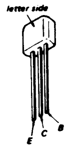
µPD7503G-310


51
33
52
32
64
20
1
19
TOP VIEW

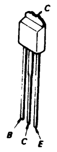
2SA812
2SA1122
2SA1162
2SA1179
2SC1623
2SC2412
2SC2712
2SC2812
2SC3052
2SD596
2SD1048
DTA114EK
DTA114ES
DTA124EK
DTA144EK
DTA144ES
DTA144WK
DTC114EK
DTC124EK
DTC143TK
DTC144EK
DTC144WK



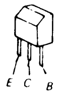
2SA1175
2SC2785


letter side
E
C
B

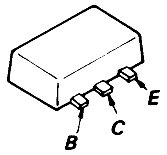
2SA1242LB
2SA1385
2SB1040A-5



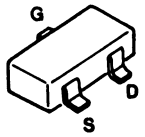
2SB733-4
2SB734



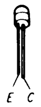
2SD999
2SD1366



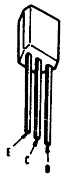
2SK160



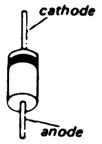
NJL7141E



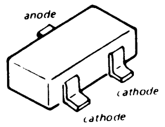
2SC2458
2SC2603



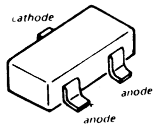
1N4148
1S1555
1S2076
1S2473
ERA81-004
HZ4ALL
US1035


cathode
anode

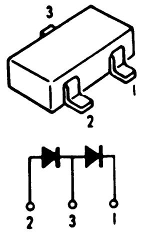
1S2835
DAP202K
MA151WA


anode
cathode
cathode

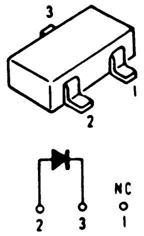
1S2837
DAN202K
MA151WK


cathode
anode
anode

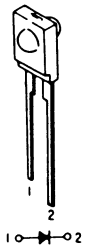
1SS123
DA204K
MA153



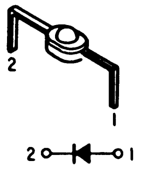
E10DS2
E10QS03
RD3.9M-B1
RD3.9M-B2
RD5.1M-B1
RD5.1M-B2
RD5.6M-B1
RD6.8M-B1
RD6.8M-B2
RD9.1M-B1
RD12M-B2



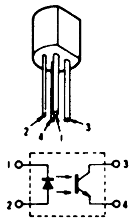
GL-450S



GL-1EG102
GL-1HY102
GL-1PR102



NJL5141E



NOTE:
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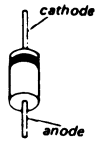
are seldom
- The constru
part are i
number in t

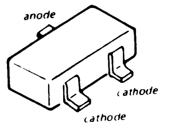
5-1. FRONT
(UPPER

No.	Part
1	X-368
2	3-686
3	*3-695
-	*3-697
4	X-368
5	X-368
6	3-695
7	*X-368
8	3-695
9	3-570
10	3-686
11	3-686
12	3-691
13	3-695
14	*1-616

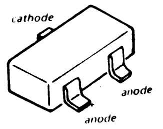
1N4148
1S1555
1S2076
1S2473
ERA81-004
HZ4ALL
US1035


cathode
anode

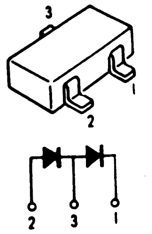
1S2835
DAP202K
MA151WA


anode
cathode
cathode

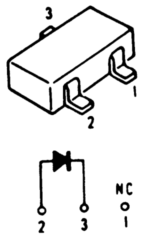
1S2837
DAN202K
MA151WK


cathode
anode
anode

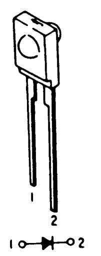
1SS123
DA204K
MA153



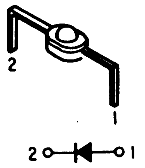
E10DS2
E10QS03
RD3.9M-B1
RD3.9M-B2
RD5.1M-B1
RD5.1M-B2
RD5.6M-B1
RD6.8M-B1
RD6.8M-B2
RD9.1M-B1
RD12M-B2



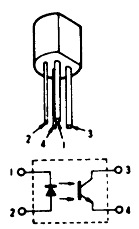
GL-450S



GL-1EG102
GL-1HY102
GL-1PR102



NJL5141E



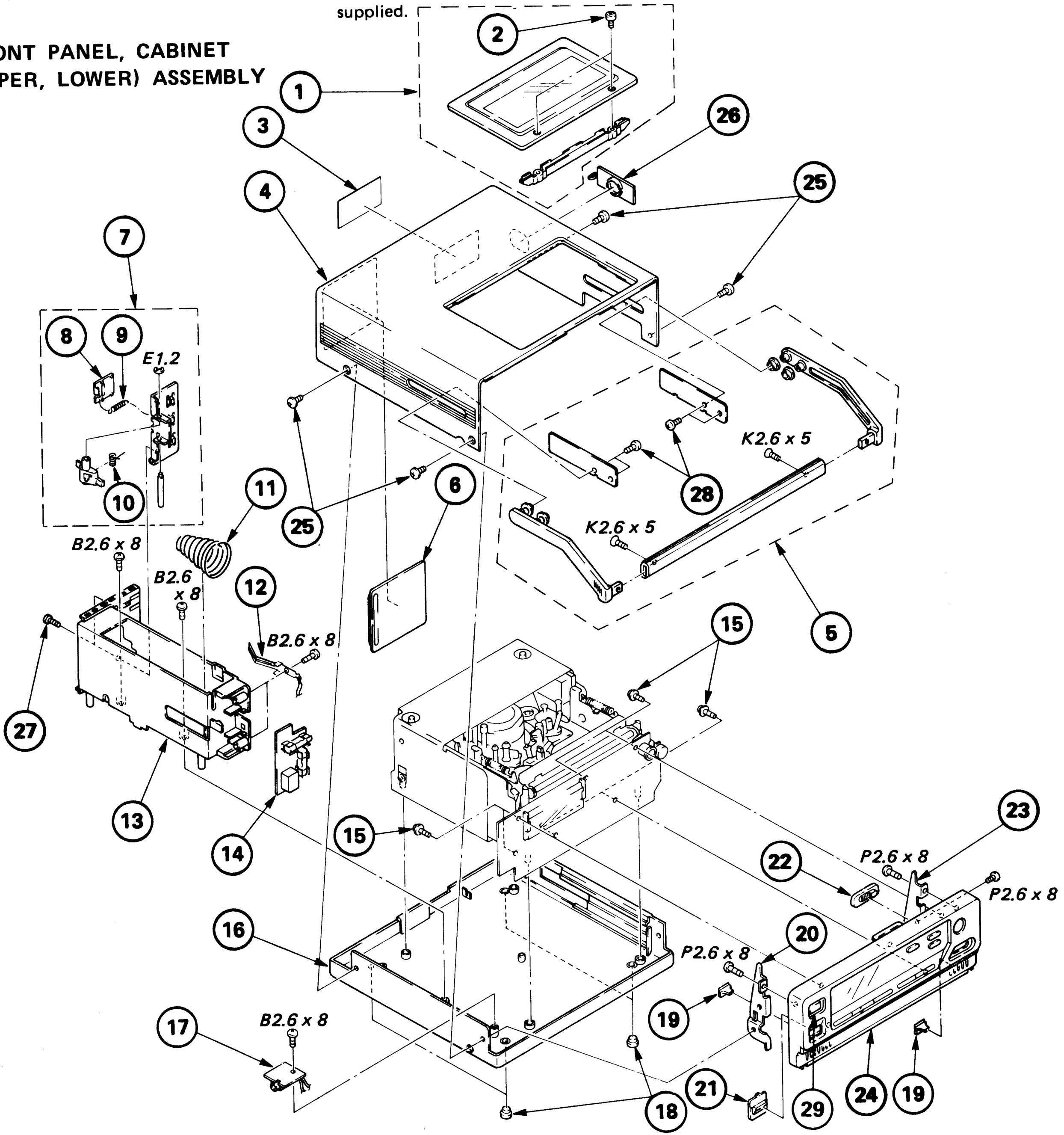
SECTION 5
EXPLODED VIEWS

NOTE:

- Itmes with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

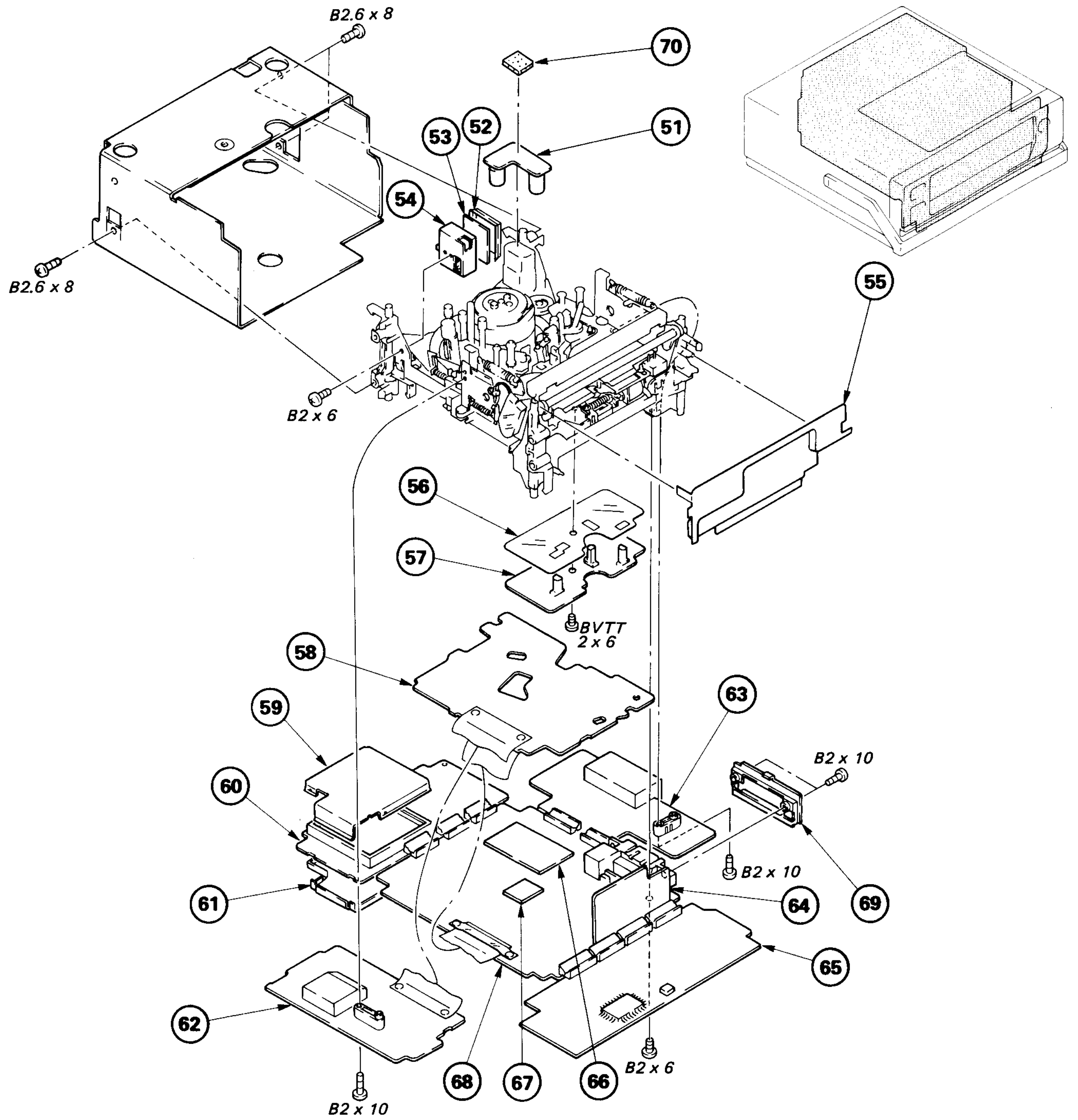
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

5-1. FRONT PANEL, CABINET (UPPER, LOWER) ASSEMBLY


1
2
3
4
5
6
7
8
9
E1.2
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
B2.6 x 8
B2.6 x 8
B2.6 x 8
B2.6 x 8
K2.6 x 5
K2.6 x 5
P2.6 x 8
P2.6 x 8
P2.6 x 8

No.	Part No.	Description	Remark
1	X-3689-045-1	LID ASSY, CASSETTE	2
2	3-686-804-01	SCREW (2X5), TAPPING	
3	*3-695-933-01	LABEL, MODEL NUMBER (AEP MODEL)	
-	*3-697-903-01	LABEL, MODEL NUMBER (E, UK MODEL)	
4	X-3689-039-1	CABINET (UPPER) ASSY	5, 28
5	X-3689-041-1	HANDLE ASSY	
6	3-695-909-01	LID, BATTERY CASE	
7	*X-3689-042-1	LOCK ASSY, BATTERY	8, 9, 10
8	3-695-915-01	BUTTON, LOCK RELEASE	
9	3-570-898-00	SPRING, TENSION	
10	3-686-788-01	SPRING	
11	3-686-775-01	SPRING	
12	3-691-994-01	TERMINAL, BATTERY	
13	3-695-930-01	HOLDER, BATTERY	
14	*1-616-898-11	FU-42 BOARD	
15	3-669-480-11	+ PTPWH 2	
16	X-3689-038-1	CABINET (LOWER) ASSY	18
17	*1-616-897-11	EP-4 BOARD	
18	3-688-931-01	FOOT, RUBBER	
19	3-691-992-01	KNOB, LS	
20	*3-695-917-01	BRACKET (LEFT), PANEL	
21	3-686-798-01	KNOB, EJECT	
22	3-691-991-01	KNOB, REC	
23	*3-695-916-01	BRACKET (RIGHT), PANEL	
24	X-3689-037-1	PANEL ASSY, FRONT	19, 23 , 29
25	3-686-999-41	SCREW (2.6X5) (C LOCK), (+) B	
26	3-695-950-01	COVER, CONNECTOR	
27	3-695-959-01	SCREW (M2X3) (C LOCK), +B	
28	3-686-999-01	SCREW (2.6X4) (C LOCK), (+) B	
29	3-686-833-02	BUTTON, POWER	

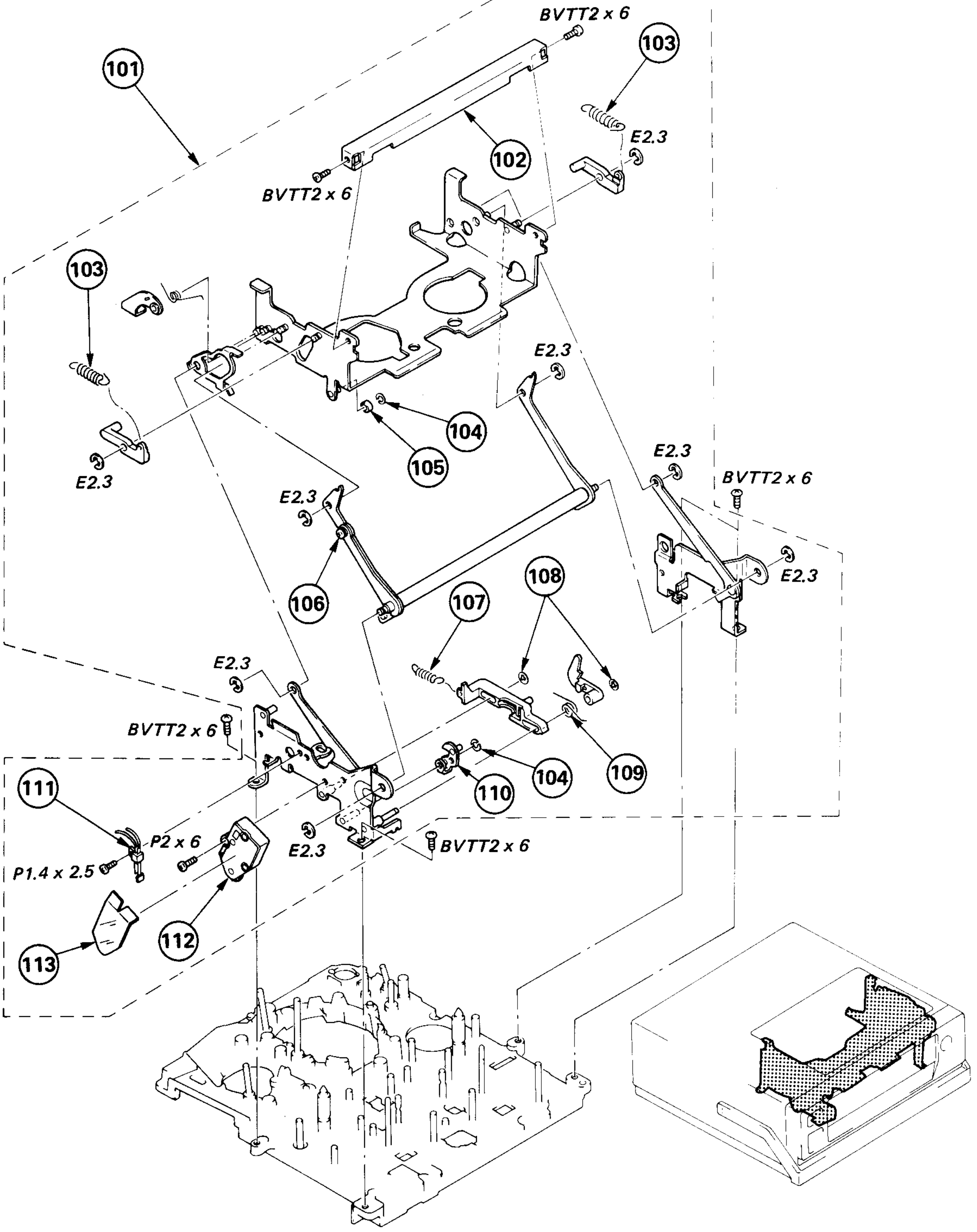
5-2. MAIN BOARD ASSEMBLY



No.	Part No.	Description	Remark
51	*1-616-893-11	SC-5 BOARD	
52	*3-686-953-02	LID, SHIELD CASE, FE	
53	*A-7060-262-A	FE-12 BOARD, COMPLETE (AEP, E MODEL)	
	*A-7060-276-A	FE-12 BOARD, COMPLETE (UK MODEL)	
54	*3-686-955-01	CASE (MAIN), SHIELD, FE	
55	*3-695-940-01	BLIND, CASSETTE COMPARTMENT	
56	*3-686-948-01	INSULATOR, RS	
57	*A-7060-261-A	RS-15 BOARD, COMPLETE (AEP, E MODEL)	
	*A-7060-275-A	RS-15 BOARD, COMPLETE (UK MODEL)	
58	*A-7060-220-A	MC-8 BOARD, COMPLETE (AEP, E MODEL)	
	*A-7060-243-A	MC-8 BOARD, COMPLETE (UK MODEL)	
59	*3-686-954-01	LID, UPPER, SHIELD CASE, AR	
60	*A-7060-263-A	AR-5 BOARD, COMPLETE (AEP, E MODEL)	
	*A-7060-277-A	AR-5 BOARD, COMPLETE (UK MODEL)	
61	*X-3686-585-1	LID ASSY, BOTTOM, SHIELD CASE	

No.	Part No.	Description	Remark
62	*A-7060-053-A	SV-14 BOARD, COMPLETE (AEP, E MODEL)	
	*A-7060-242-A	SV-14 BOARD, COMPLETE (UK MODEL)	
63	*A-7060-267-A	HD-5 BOARD, COMPLETE (AEP, E MODEL)	
	*A-7060-281-A	HD-5 BOARD, COMPLETE (UK MODEL)	
64	*A-7060-265-A	DS-14 BOARD, COMPLETE (AEP, E MODEL)	
	*A-7060-286-A	DS-14 BOARD, COMPLETE (UK MODEL)	
65	*A-7060-264-A	SK-6 BOARD, COMPLETE (AEP, E MODEL)	
	*A-7060-278-A	SK-6 BOARD, COMPLETE (UK MODEL)	
66	*A-7070-154-A	EX-3 BOARD, COMPLETE (AEP, E MODEL)	
	*A-7070-168-A	EX-3 BOARD, COMPLETE (UK MODEL)	
67	*1-616-826-11	TK-2 BOARD	
68	*A-7060-266-A	VI-7 BOARD, COMPLETE(AEP, E MODEL)	66, 67
	*A-7060-280-A	VI-7 BOARD, COMPLETE(UK MODEL)	66, 67
69	*3-695-914-01	COVER, SYSTEM CONNECTION	
70	9-911-845-XX	CUSHION	

5-3. CASSETTE COMPARTMENT ASSEMBLY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BVTT2 x 6
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E2.3
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E2.3
E2.3
BVTT2 x 6
E2.3
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P1.4 x 2.5
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BVTT2 x 6
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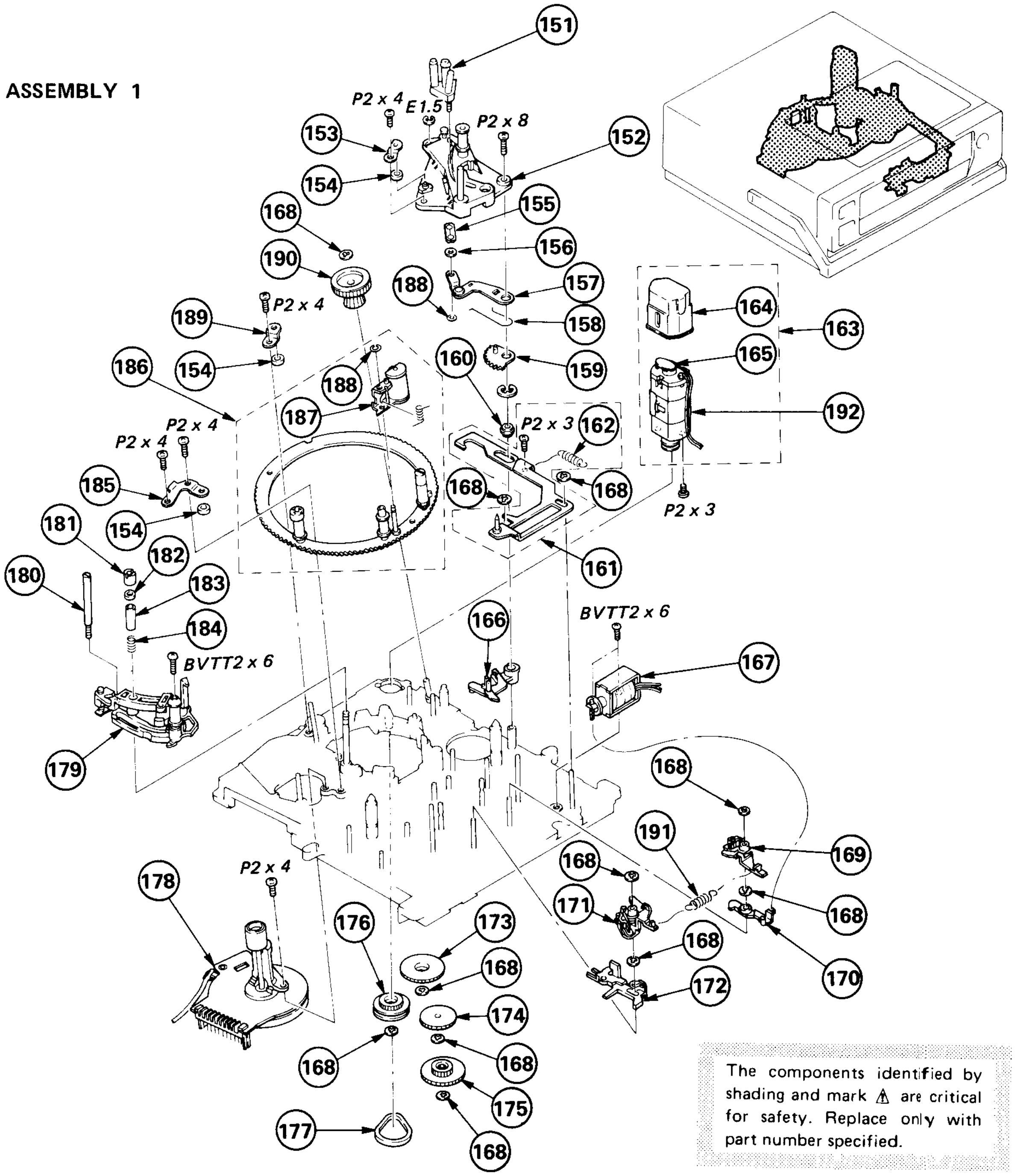
No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
101	A-7040-005-A	CASSETTE COMPARTMENT ASSY	102-103	108	3-669-465-00	WASHER (1.5), STOPPER	
102	3-686-718-01	REINFORCEMENT		109	3-686-694-01	SPRING, TORSION	
103	3-686-883-01	SPRING, TENSION		110	*X-3686-541-1	CLAW ASSY, LOCK	
104	3-578-265-11	WASHER, STOPPER		111	1-553-226-00	SWITCH, LEAF (CASSETTE LOCK) S901	
105	*3-686-693-01	ROLLER, LOCK		112	*3-681-528-00	DAMPER	
106	3-672-561-00	+PSW 2X4		113	*3-686-937-01	INSULATOR, DAMPER	
107	3-696-047-01	SPRING, TENSION					

5-4. CHASSIS ASSEMBLY 1



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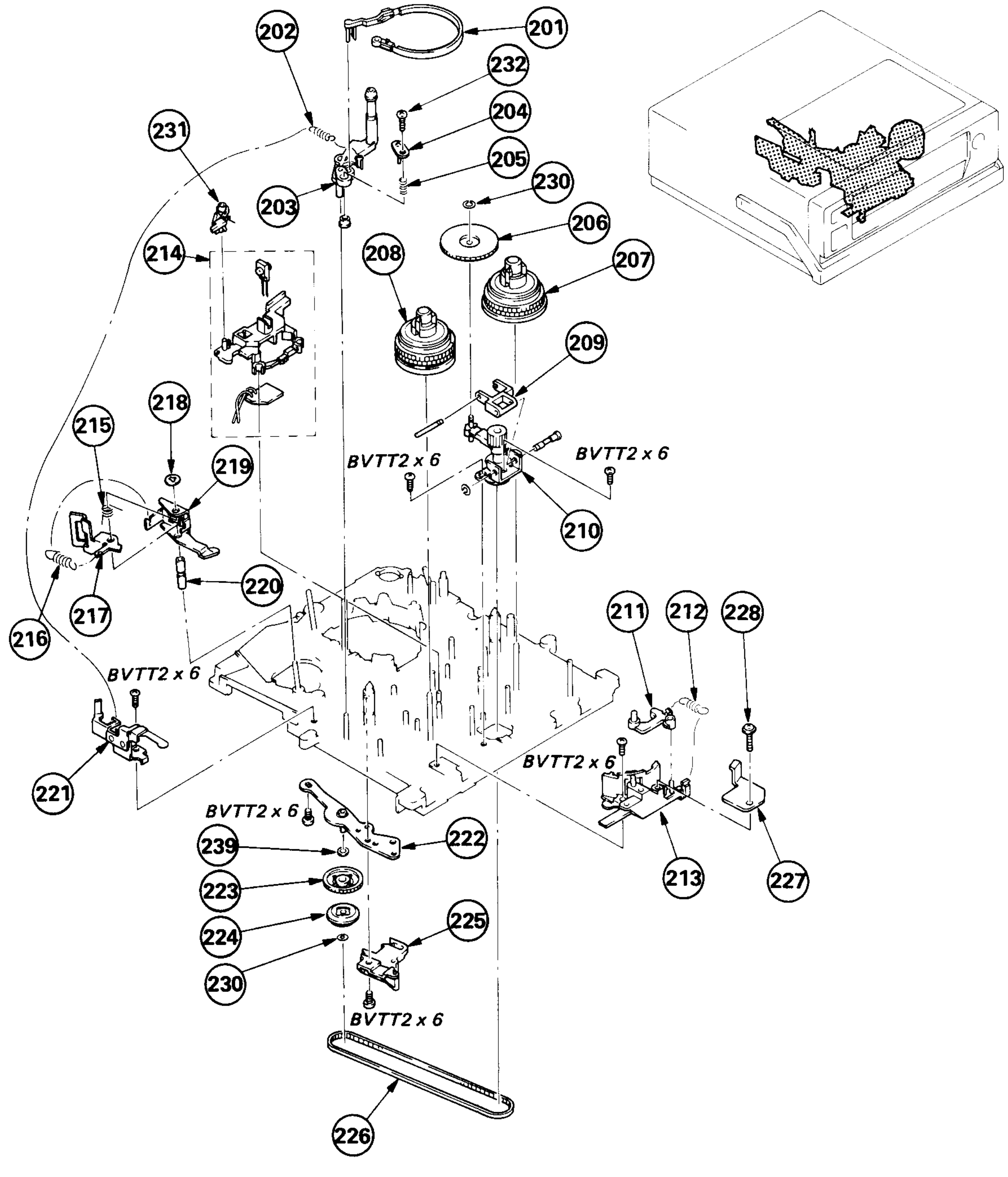
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

No.	Part No.	Description	Remark
151	X-3686-502-1	BASE ASSY, GUIDE	
152	X-3686-577-1	CHASSIS ASSY, GUIDE, SLANT	
153	*3-686-503-01	RETAINER, ROLLER	
154	3-697-538-01	ROLLER, RING	
155	3-686-663-01	WASHER, STOPPER, 2 GANG	
156	3-701-436-21	WASHER, POLYEHTHYLENE	
157	X-3686-537-1	ARM ASSY	
158	3-686-701-01	SPRING	
159	X-3686-535-1	GEAR ASSY, SECTOR	
160	3-686-537-01	RETAINER, LOCK SLODER	
161	*A-7040-014-A	SLIDER ASSY, LOCK	162
162	3-686-887-01	SPRING, TENSION	
163	⚠A-7040-009-A	MOTOR ASSY, L (LOADING) M901	164, 165
164	*3-686-757-01	CAP, SHIELD, L MOTOR	
165	1-161-073-11	CAP, CERAMIC 0.033MF C902	
166	*3-686-636-01	ARM, T.S RELEASE	
167	⚠1-454-377-11	SOLENOID, PLUNGER (BRAKE) PM901	
168	3-669-465-00	WASHER (1.5), STOPPER	
169	X-3686-574-1	BRAKE ASSY, MAIN, TAKE-UP	
170	*3-686-635-01	ARM, P	
171	X-3686-573-1	BRAKE ASSY, MAIN, SUPPLY	
172	*3-686-629-01	SLIDER, SELECTION, UPPER & LOWER	
173	3-686-508-01	GEAR, NO.2	
174	3-686-545-01	GEAR, NO.3	
175	3-686-544-01	GEAR, NO.4	
176	X-3686-514-1	GEAR ASSY, NO.1	
177	3-686-546-01	BELT, L- MOTOR	
178	8-838-077-01	MOTOR, DC (BHF-2800B) (CAPSTAN)	M902
179	A-7040-054-A	GUIDE (P) ASSY, ENTRANCE	
180	3-686-561-01	SCREW, DRUM GUARD	
181	3-686-724-01	NUT, GUIDE	
182	3-686-894-01	FLANGE, #3 #4 GUIDE	
183	3-686-912-01	GUIDE, #3 #4	
184	3-669-666-00	SPRING, COMPRESSION	
185	*3-686-675-01	STOPPER, RING	
186	A-7040-007-A	RING ASSY, LOADING	187,188
187	X-3686-576-1	ARM ASSY, PINCH ROLLER	
188	3-686-559-01	WASHER	
189	*3-686-911-01	PLATE, TOP, ROLLER	
190	3-697-518-01	GEAR, NO.10	
191	3-686-882-01	SPRING, TENSION	
192	3-691-920-01	PLATE, SHIELD, L.MOTOR	

5-5. CHASSIS ASSEMBLY 2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BVTT2 x 6
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BVTT2 x 6
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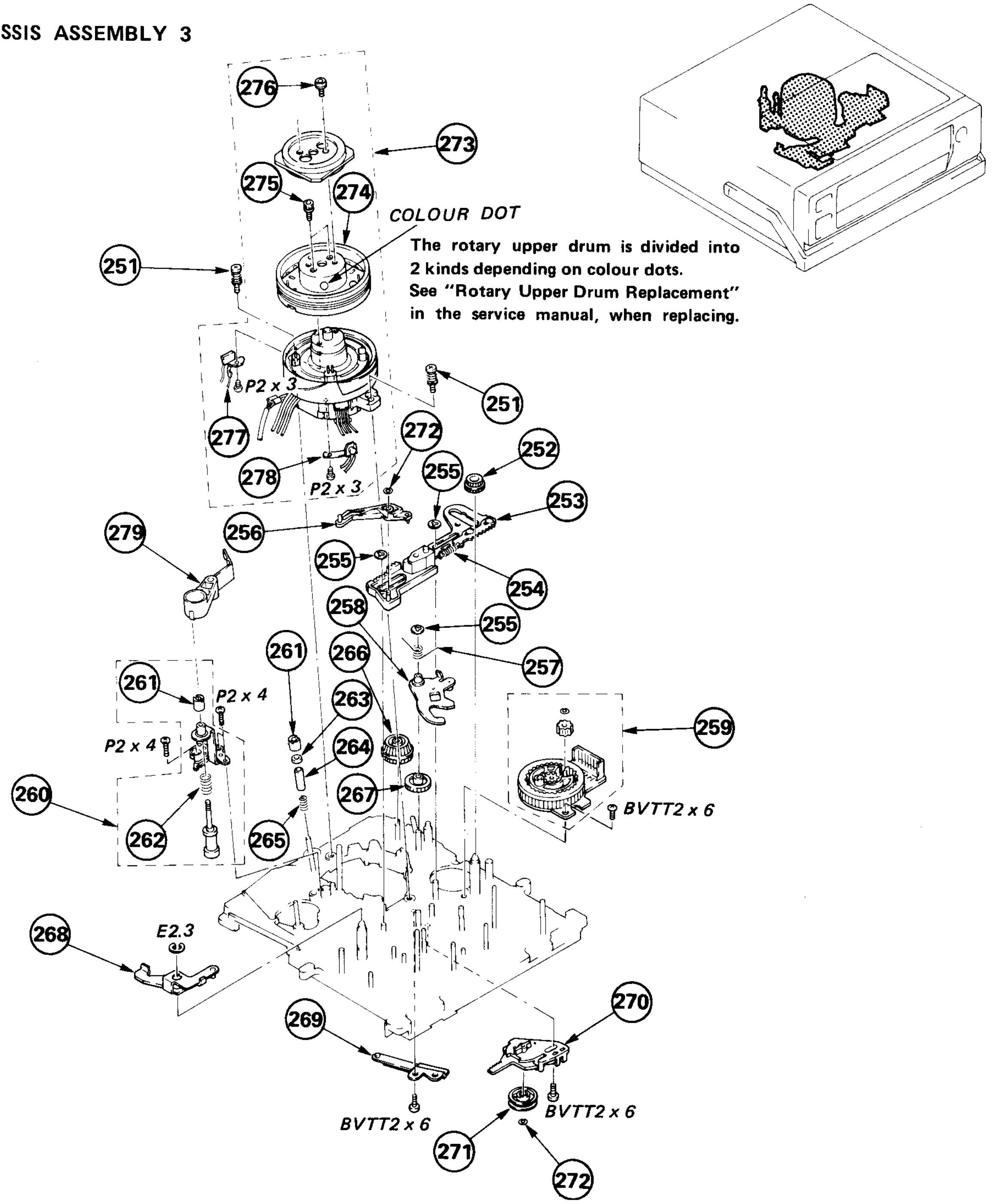
No.	Part No.	Description	Remark
201	X-3686-531-1	BAND ASSY, TENSION REGULATOR	
202	3-686-918-01	SPRING, TENSION	
203	X-3686-532-5	ARM SUB ASSY, TENSION REGULATOR	
204	*X-3686-523-1	PLATE ASSY, TENSION REGULATOR	
205	3-669-666-00	SPRING, COMPRESSION	
206	X-3686-526-1	GEAR (B) ASSY, DRIVING	
207	X-3686-572-2	TABLE ASST, REEL, TAKE-UP	
208	X-3686-571-2	TABLE ASST, REEL, SUPPLY	
209	*3-686-630-01	ARM(B), SELECTION, UPPER & LOWER	
210	X-3686-581-1	ARM COMPLETE ASSY, DRIVING	
211	*3-686-637-01	BRAKE (S), SOFT	
212	3-696-082-01	SPRING, TENSION	
213	*3-686-760-01	GUIDE, BAND	
214	*A-7070-024-A	LD-1 BOARD, COMPLETE	
215	3-686-568-01	SPRING, TORSION	
216	3-686-885-01	SPRING, TENSION	
217	*3-686-641-01	ARM, PINCH PRESS	
218	3-669-465-00	WASHER (1.5), STOPPER	
219	*3-686-660-01	ARM, PINCH LIMITER	
220	*3-686-567-01	SLEEVE, PINCH PRESS	
221	*X-3686-525-1	HOOK ASSY, SPRING	
222	*X-3686-529-1	BASE ASSY, CHANGE GEAR	
223	X-3686-520-1	GEAR ASSY, CHANGE	
224	*3-686-596-01	FLANGE, GEAR	
225	*3-686-648-01	HOLDER, WIRE	
226	3-686-646-01	BELT, TIMIMG	
227	*3-686-991-01	STOPPER, REEL TABLE	
228	3-669-480-11	+ PTPWH 2	
229	3-701-436-11	WASHER, 1.6	
230	3-686-559-01	WASHER	
231	X-3686-590-1	BRAKE ASSY, REV	
232	3-697-546-01	SCREW (+-M2X6), SPECIAL	

5-6. CHASSIS ASSEMBLY 3



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BVTT2 x 6
BVTT2 x 6
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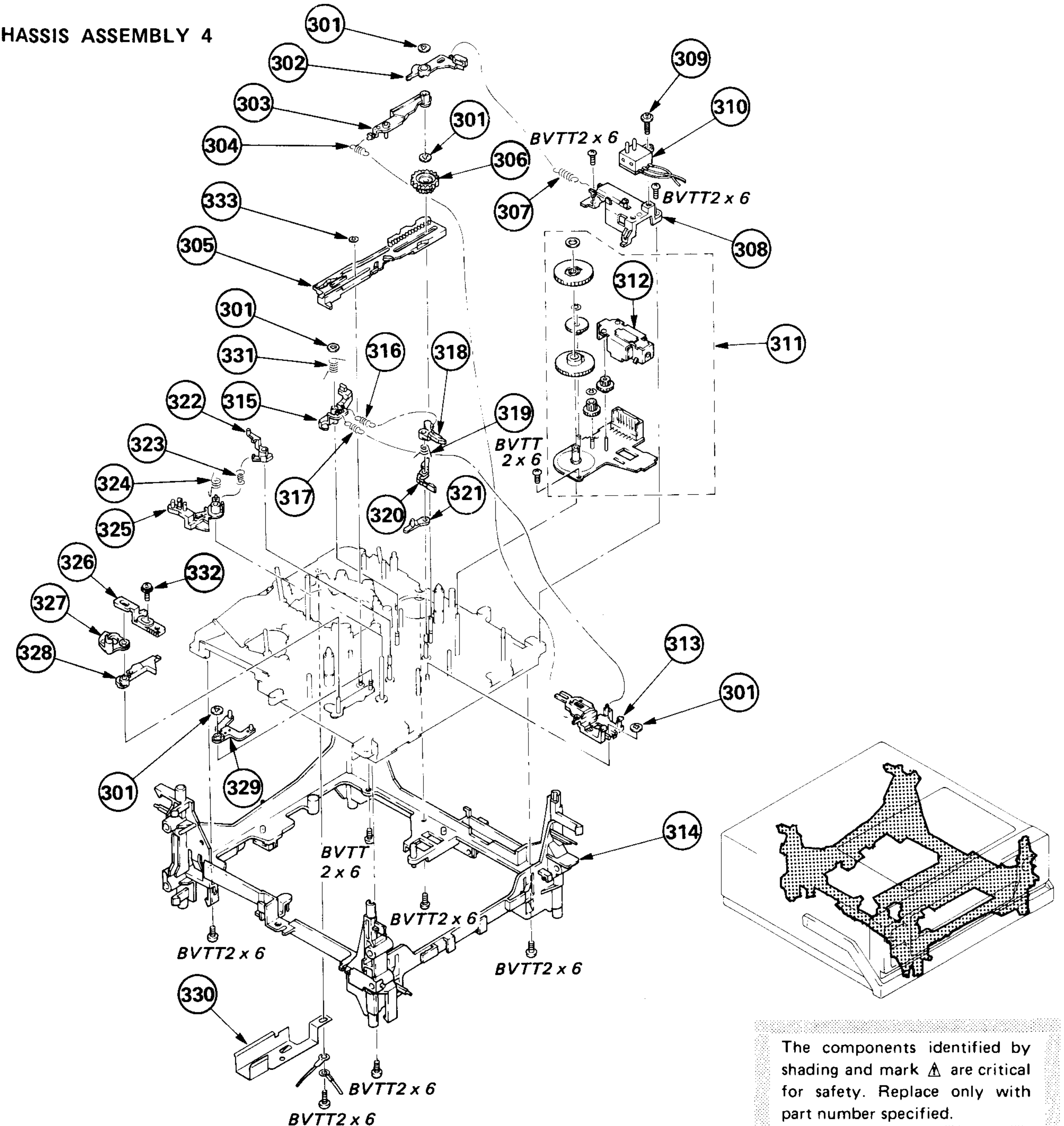
The rotary upper drum is divided into 2 kinds depending on colour dots.
See "Rotary Upper Drum Replacement" in the service manual, when replacing.

No.	Part No.	Description	Remark
251	X-3686-569-1	SCREW ASSY, FITTING	
252	3-686-702-01	GEAR, DRIVING, GUIDE, SLANT	
253	*X-3686-548-2	SLIDER SUB ASSY, L	
254	3-686-886-01	SPRING, TENSION	
255	3-669-465-00	WASHER (1.5), STOPPER	
256	*X-3686-518-1	ARM ASSY	
257	3-686-540-01	SPRING, TORSION	
258	X-3686-579-1	CHANGE ASSY, DRIVE	
259	X-3686-549-1	L-SW ASSY	
260	A-7040-053-A	GUIDE BLOCK COMPLETE ASSY, #5	261, 262
261	3-686-724-01	NUT, GUIDE	
262	3-686-889-01	SPRING, COMPRESSION	
263	*3-686-894-01	FLANGE, #3 #4 GUIDE	
264	3-686-912-01	GUIDE, #3 #4	
265	3-669-666-00	SPRING, COMPRESSION	
266	3-686-539-01	GEAR, NO.9	
267	3-686-535-01	GEAR, NO.8	
268	*X-3686-509-1	LEVER ASSY, PINCH PRESS	
269	1-535-535-11	TERMINAL, SHAFT GROUND	
270	X-3686-521-1	BASE ASSY, IDLER	
271	X-3686-522-1	IDLER ASSY	
272	3-686-559-01	WASHER	
273	A-7048-004-A	DRUM ASSY (DVH-03A-R)	
274	*A-7049-005-A	DRUM ASSY, UPPER, ROTARY (DVR-03A-R) COLOUR DOT: BLUE or RED	
	*A-7049-012-A	DRUM ASSY, UPPER, ROTARY (DVR-03-R-(0)) COLOUR DOT: BLACK or GREEN	
275	3-686-403-01	SCREW (2X5), BOLT WASHER	
276	3-686-422-01	WASHER (2X2.7), BOLT, HOLE	
277	1-806-975-11	SENSOR, DEW CONDENSATION	
278	1-806-911-11	HEATER	
279	*3-688-917-01	STOPPER, TAPE	

5-7. CHASSIS ASSEMBLY 4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BVTT 2 x 6
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BVTT2 x 6
BVTT2 x 6
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BVTT2 x 6
BVTT2 x 6

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

No.	Part No.	Description	Remark
301	3-669-465-00	WASHER (1.5), STOPPER	
302	X-3686-511-1	BRAKE ASSY, T.S	
303	*X-3686-528-1	ARM ASSY, B RELEASE	
304	3-686-903-01	SPRING, TENSION	
305	*3-686-657-08	SLIDER, M	
306	3-686-909-01	GEAR, MODE OUTPUT	
307	3-686-907-01	SPRING, TENSION	
308	*3-686-759-01	COVER, CONTROL MOTOR	
309	3-669-480-11	+ PTPWH 2	
310	1-554-942-11	SWITCH, PUSH (RECOG) S902	
311	A-7040-003-A	M-SW ASSY	312
312	⚠8-835-110-01	MOTOR, DC (DNR-5301A) (CONTROL) M903	
313	*3-686-656-01	SLIDER, B RELEASE	
314	*X-3689-034-1	FRAME ASSY, MOLD	
315	*3-686-634-01	ARM, RL	
316	3-686-906-01	SPRING, TENSION	
317	3-686-904-01	SPRING, TENSION	
318	X-3686-510-1	BRAKE ASSY, REW	
319	3-686-617-01	SPRING	
320	*3-686-638-01	ARM, RVS	
321	*3-686-580-01	ARM, SET UP	
322	3-686-996-01	BRAKE (S), HARD	
323	3-686-905-02	SPRING, TENSION	
324	3-686-603-01	SPRING	
325	*3-686-644-01	ARM, BAND	
326	*3-686-642-01	PLATE, ADJUSTMENT, BAND	
327	*3-686-755-01	DISK, EJECT	
328	*3-686-643-01	ARM, MODE	
329	*X-3686-530-1	ARM (A) ASSY, SELECTION	
330	*3-686-966-01	PLATE, SHIELD, HEAD LEAD	
331	3-686-579-01	SPRING	
332	3-686-528-01	SCREW (2X6), +	
333	3-686-559-01	WASHER	

5-8. HARD WERE LIST

SCREW

7-621-255-20	SCREW +P 2X4
7-621-255-45	SCREW +P 2X6
7-621-255-50	SCREW +P 2X8
7-621-255-75	SCREW +P 2X12
7-621-559-30	SCREW +K 2.6X5
7-621-772-08	SCREW +B 2X3
7-621-772-18	SCREW +B 2X4
7-621-772-38	SCREW +B 2X6
7-621-772-50	SCREW +B 2X10
7-621-772-58	SCREW +B 2X10
7-627-551-58	SCREW, PRECISION +P 1.4X3
7-627-553-48	SCREW, PRECISION +P 2X4
7-627-850-18	SCREW, PRECISION +P 1.4X2.5
7-685-134-14	SCREW +P 2.6X8 TYPE2 NON-SLIT
7-685-534-11	SCREW +BTP 2.6X8 TYPE2 N-S
7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
7-685-780-01	SCREW +PTT 2X3 (S)
7-685-853-01	SCREW +BVTT 2X6 (S)

STOP RING

7-624-101-01	STOP RING 1.2 (E TYPE)
7-624-102-04	STOP RING 1.5, TYPE -E
7-624-105-04	STOP RING 2.3, TYPE -E
7-624-106-04	STOP RING 3.0, TYPE -E

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

CAPACITORS

- MF : μF, PF : μμF

COILS

- MMH : mH, UH : μH

Ref.No	Part No.	Description				Remark
	*A-7060-053-A	SV-14 BOARD, COMPLETE (AEP, E MODEL)				
	*A-7060-242-A	SV-14 BOARD, COMPLETE (UK MODEL)				
	2-279-715-21	RIVET, NYLON				
		CAPACITOR				
C501	1-124-236-00	ELECT	47MF	20%	10V	
C502	1-163-077-00	CERAMIC CHIP	0.1MF		50V	
C503	1-124-577-11	ELECT	82MF	20%	10V	
C504	1-163-077-00	CERAMIC CHIP	0.1MF		50V	
C505	1-124-577-11	ELECT	82MF	20%	10V	
C506	1-124-577-11	ELECT	82MF	20%	10V	
C507	1-124-233-00	ELECT	10MF	20%	16V	
C508	1-124-234-00	ELECT	22MF	20%	16V	
C510	1-124-255-00	ELECT	1MF	20%	50V	
C511	1-124-255-00	ELECT	1MF	20%	50V	
C512	1-124-255-00	ELECT	1MF	20%	50V	
C513	1-124-258-00	ELECT	3.3MF	20%	25V	
C515	1-124-233-00	ELECT	10MF	20%	16V	
C516	1-124-233-00	ELECT	10MF	20%	16V	
C517	1-124-233-00	ELECT	10MF	20%	16V	
C518	1-135-091-00	TANTAL. CHIP	1MF	20%	16V	
C519	1-163-077-00	CERAMIC CHIP	0.1MF		50V	
C521	1-124-245-00	ELECT	4.7MF	20%	16V	
C522	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C523	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V	
C552	1-124-596-11	ELECT	27MF	20%	16V	
C553	1-124-596-11	ELECT	27MF	20%	16V	
C554	1-124-596-11	ELECT	27MF	20%	16V	
C558	1-124-275-00	ELECT	2.2MF	20%	35V	
C559	1-124-233-00	ELECT	10MF	20%	16V	
C560	1-124-275-00	ELECT	2.2MF	20%	35V	
C562	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V	
C563	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V	
C565	1-163-077-00	CERAMIC CHIP	0.1MF		50V	
C566	1-163-061-00	CERAMIC CHIP	0.015MF	10%	50V	
C567	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C568	1-163-074-00	CERAMIC CHIP	0.033MF	10%	25V	
C569	1-163-077-00	CERAMIC CHIP	0.1MF		50V	
C570	1-163-077-00	CERAMIC CHIP	0.1MF		50V	
C571	1-163-077-00	CERAMIC CHIP	0.1MF		50V	
C572	1-124-287-00	ELECT	10MF	20%	10V	
C573	1-124-258-00	ELECT	3.3MF	20%	25V	
		CONNECTOR				
CN509	1-557-555-11	CABLE, FLAT (25 CORE)				
CN510	*1-564-014-00	PIN, CONNECTOR 4P				
CN511	*1-564-021-11	PIN, CONNECTOR 11P				
CN512	*1-564-014-00	PIN, CONNECTOR 4P				
		DIODE				
D501	8-719-200-35	DIODE E10QS03				
D502	8-719-200-35	DIODE E10QS03				
D504	8-719-200-35	DIODE E10QS03				
D506	8-719-100-03	DIODE 1S2835				
		IC				
IC501	8-759-202-45	IC CX20114				
IC502	8-752-003-60	IC CX20036				
IC504	8-759-100-94	IC UPC358G2				
IC505	8-759-201-01	IC TC4066BF				
IC505	8-759-201-01	IC TC4066BF				
		COIL				
L501	1-410-125-11	COIL, CHOKE 100UH				
L502	1-410-126-11	COIL, CHOKE 200UH				
L503	1-410-126-11	COIL, CHOKE 200UH				
		TRANSISTOR				
Q501	8-729-104-95	TRANSISTOR 2SB1040A-4				
Q502	8-729-104-95	TRANSISTOR 2SB1040A-4				
Q503	8-729-100-66	TRANSISTOR 2SC1623				
Q504	8-729-700-08	TRANSISTOR NJL7141E-S				
Q508	8-729-100-66	TRANSISTOR 2SC1623				
Q509	8-729-100-66	TRANSISTOR 2SC1623				
Q510	⚠.8-729-100-76	TRANSISTOR 2SA812				
Q511	8-729-102-72	TRANSISTOR 2SA812-T1M6				
Q512	8-729-100-66	TRANSISTOR 2SC1623				
Q513	8-729-901-01	TRANSISTOR DTC144EK				
Q514	⚠.8-729-100-76	TRANSISTOR 2SA812				
Q515	⚠.8-729-901-01	TRANSISTOR DTC144EK				
Q516	8-729-100-76	TRANSISTOR 2SA812				
Q517	8-729-901-06	TRANSISTOR DTA144EK				
Q518	8-729-901-01	TRANSISTOR DTC144EK				
Q519	8-729-900-65	TRANSISTOR DTA144ES				
		RESISTOR				
R501	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R502	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R503	1-216-041-00	METAL CHIP	470	5%	1/10W	
R504	1-216-041-00	METAL CHIP	470	5%	1/10W	
R505	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R506	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R508	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R509	1-216-101-00	METAL CHIP	150K	5%	1/10W	
R510	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R511	1-216-025-00	METAL CHIP	100	5%	1/10W	
R513	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R514	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R517	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R518	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R519	1-216-081-00	METAL CHIP	22K	5%	1/10W	

Ref.No	Part No.	Description				Remark
R520	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R524	1-216-295-00	METAL CHIP	0	5%	1/10W	
R551	1-216-041-00	METAL CHIP	470	5%	1/10W	
R552	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R553	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R554	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R555	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R556	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R557	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R558	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R559	1-214-972-00	METAL	0.22	1%	1/4W	
R560	1-216-047-00	METAL CHIP	820	5%	1/10W	
R561	1-216-234-00	METAL CHIP	33K	5%	1/8W	
R562	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R563	1-216-304-11	METAL CHIP	3.3	5%	1/10W	
R564	1-216-304-11	METAL CHIP	3.3	5%	1/10W	
R565	1-216-304-11	METAL CHIP	3.3	5%	1/10W	
R566	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R568	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R569	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R570	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R571	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R572	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R573	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R574	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R575	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R576	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R578	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R581	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R582	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R583	1-216-107-00	METAL CHIP	270K	5%	1/10W	
R584	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R585	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R587	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R588	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R589	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R590	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R591	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R592	⚠1-216-049-00	METAL CHIP	1K	5%	1/10W	
R593	⚠1-216-025-00	METAL CHIP	100	5%	1/10W	
R595	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R596	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R597	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R598	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R599	1-216-295-00	METAL CHIP	0	5%	1/10W	

VARIABLE RESISTOR

Ref.No	Part No.	Description
RV501	1-230-529-11	RES, ADJ, METAL GLAZE 470K
RV502	1-230-528-11	RES, ADJ, METAL GLAZE 220K
RV503	1-230-528-11	RES, ADJ, METAL GLAZE 220K
RV504	1-230-523-11	RES, ADJ, METAL GLAZE 10K

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Ref.No	Part No.	Description	Remark
	*A-7060-220-A	MC-8 BOARD, COMPLETE (AEP, E MODEL)	

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Ref.No	Part No.	Description	Remark
	*A-7060-243-A	MC-8 BOARD, COMPLETE (UK MODEL)	

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Ref.No	Part No.	Description	Remark
	2-279-715-21	RIVET, NYLON	

CAPACITOR

Ref.No	Part No.	Description			
C501	1-124-233-00	ELECT	10MF	20%	16V
C502	1-124-233-00	ELECT	10MF	20%	16V
C505	1-124-234-00	ELECT	22MF	20%	10V
C506	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C507	1-163-020-00	CERAMIC CHIP	0.0082MF	10%	50V
C508	1-124-257-00	ELECT	2.2MF	20%	35V
C509	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C510	1-124-268-00	ELECT	0.22MF	20%	50V
C512	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C513	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C514	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C515	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C516	1-124-287-00	ELECT	10MF	20%	10V
C518	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C519	1-124-275-00	ELECT	2.2MF	20%	35V
C601	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C602	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C603	1-124-233-00	ELECT	10MF	20%	16V
C604	1-124-222-00	ELECT	22MF	20%	6.3V
C605	1-124-234-00	ELECT	22MF	20%	16V
C606	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C607	1-124-233-00	ELECT	10MF	20%	16V
C608	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C609	1-124-254-00	ELECT	0.68MF	20%	50V
C610	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C611	1-163-064-00	CERAMIC CHIP	0.027MF	10%	50V
C614	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V

CONNECTOR

Ref.No	Part No.	Description
CN501	*1-564-013-00	PIN, CONNECTOR 3P
CN502	*1-564-022-00	PIN, CONNECTOR 12P
CN503	*1-564-028-00	PIN, CONNECTOR 3P
CN505	*1-564-012-00	PIN, CONNECTOR 2P
CN506	*1-562-583-11	CONNECTOR (FPC & FC)
CN507	*1-564-014-00	PIN, CONNECTOR 4P
CN508	*1-564-014-00	PIN, CONNECTOR 4P

DIODE

Ref.No	Part No.	Description
D501	8-719-104-23	DIODE 1SS123
D601	8-719-200-27	DIODE E10DS2
D602	8-719-200-27	DIODE E10DS2
D603	8-719-100-05	DIODE 1S2837
D604	8-719-100-03	DIODE 1S2835
D605	8-719-914-11	DIODE HZ4ALL
D606	8-719-100-05	DIODE 1S2837

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

MC-8

Ref.No	Part No.	Description	Remark
		IC	
IC501	8-759-102-29	IC CX20115	
IC502	8-752-003-50	IC CX20035	
IC601	8-759-922-27	IC MB88505-342M	
IC602	8-759-201-80	IC TC4526BF	
		COIL	
L501	1-407-165-XX	MICRO INDUCTOR 47UH	
L601	1-410-125-11	COIL, CHOKE 100UH	
L602	1-408-987-21	MICRO INDUCTOR 330UH	
		IC LINK	
PS601⚠	1-532-685-11	LINK, IC(ICP-N20)	
PS602⚠	1-532-637-21	LINK, IC(ICP-F25)	
		TRANSISTOR	
Q502	8-729-100-66	TRANSISTOR 2SC1623	
Q503	8-729-901-04	TRANSISTOR DTA114EK	
Q504	8-729-100-66	TRANSISTOR 2SC1623	
Q505	8-729-100-76	TRANSISTOR 2SA812	
Q506	8-729-100-66	TRANSISTOR 2SC1623	
Q507	8-729-100-76	TRANSISTOR 2SA812	
Q508	8-729-100-76	TRANSISTOR 2SA812	
Q509	8-729-100-66	TRANSISTOR 2SC1623	
Q510	8-729-901-06	TRANSISTOR DTA144EK	
Q511	8-729-901-01	TRANSISTOR DTC144EK	
Q512	8-729-901-06	TRANSISTOR DTA144EK	
Q513	8-729-901-01	TRANSISTOR DTC144EK	
Q514	8-729-901-01	TRANSISTOR DTC144EK	
Q515	8-729-901-01	TRANSISTOR DTC144EK	
Q517	8-729-901-01	TRANSISTOR DTC144EK	
Q601	8-729-900-98	TRANSISTOR DTC143TK	
Q602	8-729-900-98	TRANSISTOR DTC143TK	
Q603	8-729-901-06	TRANSISTOR DTA144EK	
Q604	8-729-901-06	TRANSISTOR DTA144EK	
Q605	8-729-901-06	TRANSISTOR DTA144EK	
Q606	8-729-900-98	TRANSISTOR DTC143TK	
Q607	8-729-901-04	TRANSISTOR DTA114EK	
Q609	8-729-900-98	TRANSISTOR DTC143TK	
Q610	8-729-900-98	TRANSISTOR DTC143TK	
Q611	8-729-901-01	TRANSISTOR DTC144EK	
Q612	8-729-901-01	TRANSISTOR DTC144EK	
Q613	8-729-100-66	TRANSISTOR 2SC1623	
Q614	8-729-100-66	TRANSISTOR 2SC1623	
Q615	8-729-901-05	TRANSISTOR DTA124EK	
Q616	8-729-900-53	TRANSISTOR DTC114EK	
Q617	8-729-901-05	TRANSISTOR DTA124EK	
Q618	8-729-199-92	TRANSISTOR 2SD999	
Q619	8-729-202-86	TRANSISTOR 2SA1242LB	
Q620	8-729-100-66	TRANSISTOR 2SC1623	
Q621	8-729-100-76	TRANSISTOR 2SA812	
Q623	8-729-100-76	TRANSISTOR 2SA812	

Ref.No	Part No.	Description	Remark
Q624	8-729-100-66	TRANSISTOR 2SC1623	
Q625	8-729-100-66	TRANSISTOR 2SC1623	
Q626	8-729-100-66	TRANSISTOR 2SC1623	
Q627	8-729-901-01	TRANSISTOR DTC144EK	
Q630	8-729-901-06	TRANSISTOR DTA144EK	
		RESISTOR	
R502	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R503	1-216-295-00	METAL CHIP 0 5% 1/10W	
R504	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R505	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R507	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R508	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R509	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R510	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R511	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R512	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R513	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R514	1-216-099-00	METAL CHIP 120K 5% 1/10W	
R515	1-216-095-00	METAL CHIP 82K 5% 1/10W	
R516	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R517	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R518	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R519	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R520	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R521	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R522	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R523	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R524	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R525	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R526	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R527	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R528	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R529	1-216-091-00	METAL CHIP 56K 5% 1/10W	
R530	1-216-295-00	METAL CHIP 0 5% 1/10W	
R531	1-216-295-00	METAL CHIP 0 5% 1/10W	
R588	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R601	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R602	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R603	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R604	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R605	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R606	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R607	1-216-162-00	METAL CHIP 33 5% 1/8W	
R608	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R609	1-216-170-00	METAL CHIP 68 5% 1/8W	
R610	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R611	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R612	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R613	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R614	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R615	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R616	1-216-073-00	METAL CHIP 10K 5% 1/10W	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description				Remark
R617	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R618	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R619	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R620	1-216-087-00	METAL CHIP	39K	5%	1/10W	
R621	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R622	1-216-087-00	METAL CHIP	39K	5%	1/10W	
R623	1-216-190-00	METAL CHIP	470	5%	1/8W	
R624	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R625	1-216-041-00	METAL CHIP	470	5%	1/10W	
R626	1-216-045-00	METAL CHIP	680	5%	1/10W	
R627	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R628	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R629 ⚠.	1-216-194-00	METAL CHIP	680	5%	1/8W	
R630	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R631	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R632	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R635	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R636	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R637	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R638	1-216-134-00	METAL CHIP	2.2	5%	1/8W	
R639	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R640	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R641	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R642	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R643	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R644	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R645	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R646 ⚠.	1-216-194-00	METAL CHIP	680	5%	1/8W	
R647 ⚠.	1-216-194-00	METAL CHIP	680	5%	1/8W	
R650	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R651	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R652	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R653	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R654	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R655	1-216-033-00	METAL CHIP	220	5%	1/10W	
R657	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	

VARIABLE RESISTOR

Ref.No	Part No.	Description
RV601	1-230-520-11	RES, ADJ, METAL GLAZE 1K

CRYSTAL

Ref.No	Part No.	Description
X601	1-567-346-11	OSCILLATOR, CERAMIC 5MHz

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*A-7060-263-A AR-5 BOARD, COMPLETE (AEP, E MODEL)

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*A-7060-277-A AR-5 BOARD, COMPLETE (UK MODEL)

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3-686-957-01 CASE (MAIN), SHIELD, AR

CAPACITOR

Ref.No	Part No.	Description			Remark
C101	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C102	1-124-224-00	ELECT	47MF	20%	6.3V
C103	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C104	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C105	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C106	1-131-347-00	TANTALUM	1MF	10%	35V
C107	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C108	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C110	1-124-225-00	ELECT	100MF	20%	6.3V
C111	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C112	1-124-225-00	ELECT	100MF	20%	6.3V
C113	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C114	1-131-347-00	TANTALUM	1MF	10%	35V
C115	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C116	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C117	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C118	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C119	1-124-255-00	ELECT	1MF	20%	50V
C120	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C122	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C123	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C124	1-124-222-00	ELECT	22MF	20%	6.3V
C125	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C126	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C133	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C134	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C136	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C138	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C139	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C140	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C141	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C142	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C143	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C144	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C145	1-124-233-00	ELECT	10MF	20%	16V
C146	1-163-107-00	CERAMIC CHIP	39PF	5%	50V
C147	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C148	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C149	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C401	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C402	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C403	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C404	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C405	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C406	1-163-257-00	CERAMIC CHIP	180PF	5%	50V
C407	1-135-083-00	TANTAL. CHIP	0.47MF	20%	25V
C408	1-163-145-00	CERAMIC CHIP	0.0015MF	5%	50V
C409	1-163-257-00	CERAMIC CHIP	180PF	5%	50V
C410	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C411	1-163-014-00	CERAMIC CHIP	0.0027MF	10%	50V
C412	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description			Remark
C413	1-163-005-00	CERAMIC CHIP	470PF	10%	50V
C414	1-124-225-00	ELECT	100MF	20%	6.3V
C415	1-124-224-00	ELECT	47MF	20%	6.3V
C416	1-124-233-00	ELECT	10MF	20%	16V
C417	1-124-257-00	ELECT	2.2MF	20%	50V
C418	1-163-005-00	CERAMIC CHIP	470PF	10%	50V
C419	1-124-225-00	ELECT	100MF	20%	6.3V
C420	1-124-233-00	ELECT	10MF	20%	16V
C421	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V
C422	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C423	1-163-125-00	CERAMIC CHIP	220PF	10%	50V
C424	1-163-079-00	CERAMIC CHIP	0.039MF	10%	25V
C425	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C426	1-163-020-00	CERAMIC CHIP	0.0082MF	10%	50V
C427	1-124-255-00	ELECT	1MF	20%	50V
C428	1-124-233-00	ELECT	10MF	20%	16V
C429	1-124-233-00	ELECT	10MF	20%	16V
C430	1-123-618-00	ELECT	22MF	20%	6.3V
C431	1-123-612-00	ELECT	2.2MF	20%	50V
C432	1-124-253-00	ELECT	0.47MF	20%	50V
C433	1-124-225-00	ELECT	100MF	20%	6.3V
C434	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C436	1-124-225-00	ELECT	100MF	20%	6.3V
C437	1-123-610-00	ELECT	0.47MF	20%	50V
C438	1-163-257-00	CERAMIC CHIP	180PF	5%	50V
C439	1-163-014-00	CERAMIC CHIP	0.0027MF	10%	50V
C441	1-124-233-00	ELECT	10MF	20%	16V
C442	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
		CONNECTOR			
CN007	1-564-098-21	CONNECTOR, BOARD TO BOARD			
CN008	1-564-098-21	CONNECTOR, BOARD TO BOARD			
CN009	1-564-098-21	CONNECTOR, BOARD TO BOARD			
CN111	*1-564-016-00	PIN, CONNECTOR 6P			
CN112	*1-564-003-00	PIN, CONNECTOR 4P			
CN113	*1-564-003-00	PIN, CONNECTOR 4P			
CN114	*1-564-012-00	PIN, CONNECTOR 2P			
		DIODE			
D101	8-719-101-23	DIODE 1SS123			
		BAND PASS FILTER			
FL401	1-235-398-11	BPF			
		IC			
IC101	8-752-003-40	IC CX20034			
IC401	8-752-003-79	IC CX20037A			
		COIL			
L101	1-408-970-21	MICRO INDUCTOR 10UH			
L102	1-408-984-21	MICRO INDUCTOR 150UH			
L103	1-407-161-XX	MICRO INDUCTOR 22UH			

MC-Service

Ref.No	Part No.	Description				Remark
L104	1-407-161-XX	MICRO INDUCTOR 22UH				
L105	1-407-161-XX	MICRO INDUCTOR 22UH				
L106	1-408-966-21	MICRO INDUCTOR 4.7UH				
L107	1-407-177-XX	MICRO INDUCTOR 470UH				
L108	1-407-161-XX	MICRO INDUCTOR 22UH				
L109	1-407-172-XX	MICRO INDUCTOR 180UH				
L111	1-407-160-XX	MICRO INDUCTOR 18UH				
L401	1-408-948-00	MICRO INDUCTOR 220UH				
		VARIABLE COIL				
LV101	1-459-548-11	COIL, VARIABLE 330UH				
		TRANSISTOR				
Q101	8-729-100-66	TRANSISTOR 2SC1623				
Q102	8-729-901-03	TRANSISTOR DTC144WK				
Q103	8-729-901-03	TRANSISTOR DTC144WK				
Q104	8-729-271-23	TRANSISTOR 2SC2712L				
Q105	8-729-100-66	TRANSISTOR 2SC1623				
Q106	8-729-100-66	TRANSISTOR 2SC1623				
Q401	8-729-100-66	TRANSISTOR 2SC1623				
Q404	8-729-100-66	TRANSISTOR 2SC1623				
Q405	8-729-901-06	TRANSISTOR DTA144WK				
Q407	8-729-100-66	TRANSISTOR 2SC1623				
Q408	8-729-100-76	TRANSISTOR 2SA812				
		RESISTOR				
R101	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R102	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R103	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R104	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R105	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R106	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R107	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R108	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R109	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R110	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R111	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R112	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R113	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R114	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R115	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R116	1-216-043-00	METAL CHIP	560	5%	1/10W	
R117	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R118	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R119	1-216-045-00	METAL CHIP	680K	5%	1/10W	
R120	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R121	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R122	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R123	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R124	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R125	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R126	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description				Remark
R127	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R128	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R129	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R130	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R131	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R132	1-216-045-00	METAL CHIP	680	5%	1/10W	
R133	1-216-043-00	METAL CHIP	560	5%	1/10W	
R134	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R135	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R136	1-216-041-00	METAL CHIP	470	5%	1/10W	
R137	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R138	1-216-047-00	METAL CHIP	820	5%	1/10W	
R139	1-216-023-00	METAL CHIP	82	5%	1/10W	
R140	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R141	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R142	1-216-037-00	METAL CHIP	330	5%	1/10W	
R143	1-216-025-00	METAL CHIP	100	5%	1/10W	
R144	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R145	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R146	1-216-295-00	METAL CHIP	0	5%	1/10W	
R401	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R402	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R403	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R404	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R405	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R406	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R407	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R408	1-216-060-00	METAL CHIP	3K	5%	1/10W	
R409	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R410	1-247-829-00	CARBON	820	5%	1/6W	
R411	1-216-047-00	METAL CHIP	820	5%	1/10W	
R414	1-216-005-00	METAL CHIP	15	5%	1/10W	
R415	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R416	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R417	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R418	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R419	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R420	1-216-045-00	METAL CHIP	680	5%	1/10W	
R421	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R422	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R423	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R424	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R425	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R426	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R427	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R428	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R431	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R432	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R434	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R435	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R437	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R438	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R439	1-216-085-00	METAL CHIP	33K	5%	1/10W	

Ref.No	Part No.	Description				Remark
R440	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R441	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R442	1-216-041-00	METAL CHIP	470	5%	1/10W	
R444	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R445	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R446	1-216-023-00	METAL CHIP	82	5%	1/10W	
R447	1-216-043-00	METAL CHIP	560	5%	1/10W	
R448	1-216-037-00	METAL CHIP	330	5%	1/10W	
R449	1-216-041-00	METAL CHIP	470	5%	1/10W	
R453	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	

VARIABLE RESISTOR

RV101	1-230-523-11	RES, ADJ, METAL GLAZE 10K
RV102	1-230-522-11	RES, ADJ, METAL GLAZE 4.7K
RV103	1-230-524-11	RES, ADJ, METAL GLAZE 22K
RV104	1-230-522-11	RES, ADJ, METAL GLAZE 4.7K
RV105	1-230-523-11	RES, ADJ, METAL GLAZE 10K
RV106	1-230-522-11	RES, ADJ, METAL GLAZE 4.7K
RV401	1-230-524-11	RES, ADJ, METAL GLAZE 22K
RV402	1-230-523-11	RES, ADJ, METAL GLAZE 10K

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*A-7060-264-A SK-6 BOARD, COMPLETE (AEP, E MODEL)
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*A-7060-278-A SK-6 BOARD, COMPLETE (UK MODEL)
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*3-686-822-01 HOLDER, LCD

CAPACITOR

C491	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C601	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C602	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C603	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C604	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C605	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C606	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C607	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C608	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C609	1-124-233-00	ELECT	10MF	20%	16V
C610	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C611	1-124-233-00	ELECT	10MF	20%	16V
C612	1-163-081-00	CERAMIC CHIP	0.22MF		25V
C613	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C615	1-163-014-00	CERAMIC CHIP	0.0027MF	10%	50V
C616	1-125-373-11	DOUBLE LAYERS	22000MF		5.5V
C617	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C618	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C619	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C620	1-163-035-00	CERAMIC CHIP	0.047MF		50V

CONNECTOR

CN605	1-562-589-11	SOCKET, DIN (SMALL TYPE) 5P

When indicating parts by reference number, please include the board name.

SK-6

DIODE

Ref.No	Part No.	Description	Remark
D601	8-719-100-05	DIODE 1S2837	
D602	8-719-100-05	DIODE 1S2837	
D603	8-719-100-05	DIODE 1S2837	
D604	8-719-100-05	DIODE 1S2837	
D605	8-719-100-05	DIODE 1S2837	
D606	8-719-100-05	DIODE 1S2837	
D607	8-719-100-05	DIODE 1S2837	
D608	8-719-100-03	DIODE 1S2835	
D609	8-719-100-05	DIODE 1S2837	
D611	8-719-100-05	DIODE 1S2837	
D612	8-719-100-05	DIODE 1S2837	
D613	8-719-100-03	DIODE 1S2835	
D614	8-719-918-67	DIODE GL-1EG102	
D615	8-719-918-65	DIODE GL-1PR102	
D616	8-719-918-67	DIODE GL-1EG102	
D617	8-719-918-65	DIODE GL-1PR102	
D618	8-719-918-66	DIODE GL-1HY102	
D619	8-719-918-66	DIODE GL-1HY102	
D620	8-719-106-71	DIODE RD12M-B2	
D621	8-719-106-71	DIODE RD12M-B2	
D622	8-719-106-71	DIODE RD12M-B2	
D623	8-719-801-43	DIODE 1SS196	
D670	8-719-918-66	DIODE GL-1HY102	
D671	8-719-918-66	DIODE GL-1HY102	

IC

Ref.No	Part No.	Description	Remark
IC601	8-759-105-83	IC UPD7503G-310	
IC602	8-759-200-77	IC TC4028BF	
IC603	8-757-991-00	IC CX-7991	
IC604	8-759-100-93	IC UPC393G2	
IC605	8-759-200-82	IC TC4069UBF	

DISPLAY PANEL

Ref.No	Part No.	Description	Remark
ND601	1-806-917-11	DISPLAY PANEL, LIQUID CRYSTAL	

TRANSISTOR

Ref.No	Part No.	Description	Remark
Q601	8-729-100-66	TRANSISTOR 2SC1623	
Q602	8-729-400-76	TRANSISTOR 2SD1030	
Q603	8-729-100-66	TRANSISTOR 2SC1623	
Q604	8-729-100-66	TRANSISTOR 2SC1623	
Q605	8-729-100-66	TRANSISTOR 2SC1623	
Q606	8-729-100-66	TRANSISTOR 2SC1623	
Q607	8-729-100-76	TRANSISTOR 2SA812	
Q608	8-729-100-76	TRANSISTOR 2SA812	
Q609	8-729-901-01	TRANSISTOR DTC144EK	
Q612	8-729-901-06	TRANSISTOR DTA144EK	
Q613	8-729-100-66	TRANSISTOR 2SC1623	

RESISTOR

Ref.No	Part No.	Description				Remark
R601	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R602	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R603	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R604	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R605	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R606	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R607	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R608	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R609	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R610	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R611	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R612	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R613	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R614	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R615	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R616	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R617	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R618	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R619	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R620	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R621	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R622	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R623	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R624	1-216-037-00	METAL CHIP	330	5%	1/10W	
R625	1-216-037-00	METAL CHIP	330	5%	1/10W	
R626	1-216-031-00	METAL CHIP	180	5%	1/10W	
R627	1-216-035-00	METAL CHIP	270	5%	1/10W	
R628	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R629	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R630	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R631	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R632	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R633	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R634	1-216-087-00	METAL CHIP	39K	5%	1/10W	
R635	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R636	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R637	1-216-037-00	METAL CHIP	330	5%	1/10W	
R639	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R640	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R641	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R642	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R643	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R644	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R645	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R646	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R647	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R648	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R649	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R650	1-216-047-00	METAL CHIP	820	5%	1/10W	
R651	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R652	1-216-168-00	METAL CHIP	56	5%	1/8W	
R653	1-216-168-00	METAL CHIP	56	5%	1/8W	
R654	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R670	1-216-035-00	METAL CHIP	270	5%	1/10W	
R671	1-216-295-00	METAL CHIP	0	5%	1/10W	

When indicating parts by reference number, please include the board name.

SWITCH

Ref.No	Part No.	Description	Remark
S601	1-554-174-00	SWITCH, KEY BOARD	
S602	1-554-174-00	SWITCH, KEY BOARD	
S603	1-554-174-00	SWITCH, KEY BOARD	
S604	1-554-364-00	SWITCH, SLIDE	
S605	1-554-364-00	SWITCH, SLIDE	
S606	1-554-174-00	SWITCH, KEY BOARD	
S607	1-554-174-00	SWITCH, KEY BOARD	
S608	1-554-174-00	SWITCH, KEY BOARD	
S609	1-554-174-00	SWITCH, KEY BOARD	
S610	1-554-174-00	SWITCH, KEY BOARD	
S611	1-554-303-21	SWITCH, KEY BOARD	
S612	1-553-977-00	SWITCH, SLIDE	
S613	1-553-977-00	SWITCH, SLIDE	

CRYSTAL

Ref.No	Part No.	Description	Remark
X601	1-527-532-00	OSCILLATOR, CERAMIC 400KHz	

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*A-7060-265-A DS-14 BOARD, COMPLETE (AEP, E MODEL)
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*A-7060-286-A DS-14 BOARD, COMPLETE (UK MODEL)
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CAPACITOR

Ref.No	Part No.	Description	Remark
C601	1-163-081-00	CERAMIC CHIP 0.22MF 25V	
C603	1-124-258-00	ELECT 3.3MF 20% 25V	
C604	1-124-258-00	ELECT 3.3MF 20% 25V	
C605	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C606	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C607	1-163-035-00	CERAMIC CHIP 0.047MF 50V	
C608	1-124-239-00	ELECT 6.8MF 20% 16V	
C610	1-163-081-00	CERAMIC CHIP 0.22MF 25V	
C611	1-163-081-00	CERAMIC CHIP 0.22MF 25V	
C615	1-163-081-00	CERAMIC CHIP 0.22MF 25V	
C616	1-163-035-00	CERAMIC CHIP 0.047MF 50V	
C617	1-163-081-00	CERAMIC CHIP 0.22MF 25V	
C620	1-124-233-00	ELECT 10MF 20% 16V	
C621	1-124-258-00	ELECT 3.3MF 20% 25V	
C622	1-163-081-00	CERAMIC CHIP 0.22MF 25V	
C623	1-163-081-00	CERAMIC CHIP 0.22MF 25V	

CONNECTOR

Ref.No	Part No.	Description	Remark
CN010	*1-564-317-00	PIN, BOARD TO BOARD 5P	
CN011	*1-564-318-00	PIN, BOARD TO BOARD 10P	
CN012	*1-564-318-00	PIN, BOARD TO BOARD 10P	

DIODE

Ref.No	Part No.	Description	Remark
D601	8-719-100-05	DIODE 1S2837	
D603	8-719-100-05	DIODE 1S2837	
D604	8-719-100-03	DIODE 1S2835	
D605	8-719-106-43	DIODE RD9.1M-B1	
D606	8-719-105-58	DIODE RD3.9M-B2	
D610	8-719-100-05	DIODE 1S2837	
D611	8-719-100-05	DIODE 1S2837	

IC

Ref.No	Part No.	Description	Remark
IC601	8-759-200-82	IC TC4069UBF	
IC602	8-759-205-78	IC TC504013BF	
IC603	8-759-910-84	IC MB88201-170N	
IC604	8-759-100-93	IC UPC393G2	
IC605	8-759-200-68	IC TC4011BF	

COIL

Ref.No	Part No.	Description	Remark
L601	1-408-987-21	MICRO INDUCTOR 330UH	

TRANSISTOR

Ref.No	Part No.	Description	Remark
Q601	8-729-901-06	TRANSISTOR DTA144EK	
Q603	8-729-901-01	TRANSISTOR DTC144EK	
Q604	8-729-100-66	TRANSISTOR 2SC1623	
Q605	8-729-901-01	TRANSISTOR DTC144EK	
Q606	8-729-100-66	TRANSISTOR 2SC1623	
Q607	8-729-901-01	TRANSISTOR DTC144EK	
Q608	8-729-900-98	TRANSISTOR DTC143TK	
Q609	8-729-901-01	TRANSISTOR DTC144EK	
Q610	8-729-100-66	TRANSISTOR 2SC1623	
Q611	8-729-901-01	TRANSISTOR DTC144EK	
Q612	8-729-901-01	TRANSISTOR DTC144EK	
Q613	8-729-901-01	TRANSISTOR DTC144EK	
Q616	8-729-100-66	TRANSISTOR 2SC1623	
Q617	8-729-100-66	TRANSISTOR 2SC1623	
Q618	8-729-901-01	TRANSISTOR DTC144EK	
Q619	8-729-901-01	TRANSISTOR DTC144EK	
Q620	8-729-901-01	TRANSISTOR DTC144EK	

RESISTOR

Ref.No	Part No.	Description	Remark
R601	1-216-033-00	METAL CHIP 220 5% 1/10W	
R602	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R603	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R604	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R609	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R610	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R611	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R612	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R613	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R614	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R615	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R616	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R617	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R618	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R619	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R620	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R621	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R622	1-216-037-00	METAL CHIP 330 5% 1/10W	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description				Remark
R623	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R624	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R625	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R626	1-216-039-00	METAL CHIP	390	5%	1/10W	
R627	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R628	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R629	1-216-295-00	METAL CHIP	0	5%	1/10W	
R630	1-216-039-00	METAL CHIP	390	5%	1/10W	
R637	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R639	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R640	1-216-025-00	METAL CHIP	100	5%	1/10W	
R641	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R642	1-216-103-00	METAL CHIP	180K	5%	1/10W	
R643	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R644	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R645	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R646	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R647	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R648	1-216-119-00	METAL CHIP	820K	5%	1/10W	
R649	1-216-119-00	METAL CHIP	820K	5%	1/10W	
R650	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R651	1-216-081-00	METAL CHIP	22K	5%	1/10W	

CRYSTAL

X601	1-567-143-00	OSCILLATOR, CERAMIC 6MHz

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*A-7060-266-A VI-7 BOARD, COMPLETE (AEP, E MODEL)
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*A-7060-280-A VI-7 BOARD, COMPLETE (UK MODEL)
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	2-279-715-21	RIVET, NYLON
	3-686-934-01	REINFORCEMENT (A), FLAT CABLE

CAPACITOR

Ref.No	Part No.	Description			Remark
C101	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C102	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C103	1-163-257-00	CERAMIC CHIP	180PF	5%	50V
C104	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C105	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C106	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C107	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C108	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C109	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C110	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C111	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C112	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C113	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C114	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C115	1-135-096-21	TANTAL. CHIP	4.7MF	10%	10V
C116	1-135-096-21	TANTAL. CHIP	4.7MF	10%	10V
C117	1-124-442-00	ELECT	330MF	20%	6.3V
C118	1-135-091-00	TANTAL. CHIP	1MF	10%	16V
C119	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C131	1-135-072-21	TANTAL. CHIP	0.22MF	10%	35V
C132	1-135-100-21	TANTAL. CHIP	6.8MF	10%	6.3V
C133	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C134	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C135	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C136	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C137	1-135-100-21	TANTAL. CHIP	6.8MF	10%	6.3V
C139	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C141	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C142	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C143	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C144	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C145	1-163-137-00	CERAMIC CHIP	680PF	10%	50V
C146	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C147	1-135-100-21	TANTAL. CHIP	6.8MF	10%	6.3V
C148	1-135-100-21	TANTAL. CHIP	6.8MF	10%	6.3V
C149	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C150	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C151	1-135-104-00	TANTAL. CHIP	10MF	10%	4V
C152	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C153	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C154	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C155	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C165	1-135-096-21	TANTAL. CHIP	4.7MF	10%	10V
C167	1-135-096-21	TANTAL. CHIP	4.7MF	10%	10V
C168	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C169	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C170	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C171	1-135-100-21	TANTAL. CHIP	6.8MF	10%	6.3V
C172	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C174	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C175	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C176	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C178	1-135-096-21	TANTAL. CHIP	4.7MF	10%	10V
C179	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C180	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C181	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C182	1-135-100-21	TANTAL. CHIP	6.8MF	10%	6.3V
C183	1-163-021-00	CERAMIC CHIP	0.01MF		50V
C184	1-135-100-21	TANTAL. CHIP	6.8MF	10%	6.3V
C185	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C186	1-163-033-00	CERAMIC CHIP	0.022MF	10%	25V
C187	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C188	1-163-074-00	CERAMIC CHIP	0.033MF	10%	25V
C189	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C190	1-163-075-00	CERAMIC CHIP	0.047MF	10%	25V
C191	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C192	1-163-145-00	CERAMIC CHIP	0.0015MF	10%	50V
C193	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C196	1-163-013-00	CERAMIC CHIP	0.0022MF	10%	50V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description		Remark
C199	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C200	1-135-100-21	TANTAL. CHIP 6.8MF	10%	6.3V
C201	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C202	1-135-100-21	TANTAL. CHIP 6.8MF	10%	6.3V
C203	1-163-074-00	CERAMIC CHIP 0.033MF	10%	25V
C204	1-163-129-00	CERAMIC CHIP 330PF	10%	50V
C205	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C206	1-135-100-21	TANTAL. CHIP 6.8MF	10%	6.3V
C207	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V
C208	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C209	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C210	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C211	1-163-131-00	CERAMIC CHIP 390PF	5%	50V
C212	1-163-129-00	CERAMIC CHIP 330PF	10%	50V
C213	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C214	1-135-099-00	TANTAL. CHIP 2.2MF	10%	6.3V
C215	1-163-115-00	CERAMIC CHIP 82PF	5%	50V
C216	1-163-143-00	CERAMIC CHIP 0.0012MF	5%	50V
C217	1-163-129-00	CERAMIC CHIP 330PF	10%	50V
C218	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C219	1-135-099-00	TANTAL. CHIP 2.2MF	10%	6.3V
C220	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C221	1-163-033-00	CERAMIC CHIP 0.022MF		50V
C222	1-163-033-00	CERAMIC CHIP 0.022MF		50V
C223	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C224	1-135-072-21	TANTAL. CHIP 0.22MF	10%	35V
C225	1-135-099-00	TANTAL. CHIP 2.2MF	10%	6.3V
C226	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C227	1-135-100-21	TANTAL. CHIP 6.8MF	10%	6.3V
C229	1-135-096-21	TANTAL. CHIP 4.7MF	10%	10V
C230	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C231	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V
C232	1-135-100-21	TANTAL. CHIP 6.8MF	10%	6.3V
C233	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C234	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C235	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C236	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C237	1-163-108-00	CERAMIC CHIP 43PF	5%	50V
C238	1-163-104-00	CERAMIC CHIP 30PF	5%	50V
C240	1-163-257-00	CERAMIC CHIP 180PF	5%	50V
C241	1-163-143-00	CERAMIC CHIP 0.0012MF	10%	50V
C242	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C243	1-163-129-00	CERAMIC CHIP 330PF	10%	50V
C246	1-135-073-00	TANTAL. CHIP 0.33MF	10%	35V
C247	1-135-070-00	TANTAL. CHIP 0.1MF	10%	35V
C248	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C249	1-135-100-21	TANTAL. CHIP 6.8MF	10%	6.3V
C250	1-163-118-00	CERAMIC CHIP 110PF	5%	50V
C251	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C252	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C253	1-163-335-11	CERAMIC CHIP 0.001MF	5%	50V
C254	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C255	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V

Ref.No	Part No.	Description		Remark
C256	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C257	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C259	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C260	1-135-099-00	TANTAL. CHIP 2.2MF	10%	6.3V
C261	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V
C262	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V
C263	1-163-145-00	CERAMIC CHIP 0.0015MF	10%	50V
C264	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C265	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C266	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C267	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C268	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C269	1-163-145-00	CERAMIC CHIP 0.0015MF	5%	50V
C270	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C271	1-163-111-00	CERAMIC CHIP 56PF	5%	50V
C272	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C273	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C274	1-163-115-00	CERAMIC CHIP 82PF	5%	50V
C275	1-163-115-00	CERAMIC CHIP 82PF	5%	50V
C276	1-135-100-21	TANTAL. CHIP 6.8MF	10%	6.3V
C277	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C278	1-124-233-00	ELECT 10MF	20%	16V
C279	1-124-222-00	ELECT 22MF	20%	6.3V
C280	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C281	1-124-222-00	ELECT 22MF	20%	6.3V
C283	1-135-100-21	TANTAL. CHIP 6.8MF	10%	6.3V
C284	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C285	1-124-499-11	ELECT 1MF	20%	50V
C286	1-163-075-00	CERAMIC CHIP 0.047MF	10%	25V
C287	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C288	1-135-100-21	TANTAL. CHIP 6.8MF	10%	6.3V
C289	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C290	1-163-115-00	CERAMIC CHIP 82PF	5%	50V
C291	1-124-587-11	ELECT 220MF	20%	6.3V
C292	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C293	1-135-100-21	TANTAL. CHIP 6.8MF	10%	6.3V
C294	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C295	1-163-021-00	CERAMIC CHIP 0.01MF		50V
C296	1-124-233-00	ELECT 10MF	20%	16V
C297	1-163-129-00	CERAMIC CHIP 330PF	10%	50V
C299	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C301	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C303	1-135-091-00	TANTAL. CHIP 1MF	10%	16V
C309	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C310	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C311	1-163-090-00	CERAMIC CHIP 7PF	0.25PF	50V

CONNECTOR

CN001	1-564-610-21	CONNECTOR, BOARD TO BOARD
CN002	1-564-610-21	CONNECTOR, BOARD TO BOARD
CN003	1-564-610-21	CONNECTOR, BOARD TO BOARD
CN004	1-564-610-21	CONNECTOR, BOARD TO BOARD
CN016	*1-506-580-11	PIN, BOARD TO BOARD 2P

When indicating parts by reference number, please include the board name.

VI-7

Ref.No	Part No.	Description	Remark
CN101	*1-564-005-00	PIN, CONNECTOR 6P	
CN102	*1-564-001-11	PIN, CONNECTOR 2P	
CN103	*1-564-002-00	PIN, CONNECTOR 3P	
CN104	1-562-582-11	SOCKET, CONNECTOR 24P	
CN109	*1-564-013-00	PIN, CONNECTOR 3P	
CN110	1-557-554-11	CABLE, FLAT (26 CORE)	

TRIMMER

Ref.No	Part No.	Description	Remark
CV101	1-141-227-00	CAP, CERAMIC TRIMMER	

DIODE

Ref.No	Part No.	Description	Remark
D103	8-719-100-05	DIODE 1S2837	
D104	8-719-100-05	DIODE 1S2837	
D105	8-719-100-05	DIODE 1S2837	
D106	8-719-101-23	DIODE 1SS123	
D107	8-719-101-23	DIODE 1SS123	
D109	8-719-101-23	DIODE 1SS123	
D110	8-719-101-23	DIODE 1SS123	

DELAY LINE

Ref.No	Part No.	Description	Remark
DL101	1-415-385-11	DELAY LINE, 2H (4.43MHZ)	
DL102	1-415-386-11	DELAY LINE, 1H (13.3MHZ)	

FILTER

Ref.No	Part No.	Description	Remark
FL102	1-409-394-11	TRAP, CHROMA EMPHASIS	
FL103	1-235-438-11	BPF, REC C	
FL104	1-235-437-11	BPF, PB C	
FL105	1-235-632-11	BPF	
FL106	1-235-633-11	BPF	
FL107	1-235-436-11	FILTER, BAND PASS (16KHZ)	
FL108	1-235-435-11	FILTER, BAND PASS (45KHZ)	

IC

Ref.No	Part No.	Description	Remark
IC101	8-752-003-00	IC CX20030	
IC102	8-752-003-10	IC CX20031	
IC103	8-752-202-10	IC CX22021	
IC104	8-752-003-20	IC CX20032	
IC105	8-759-914-56	IC CX23054	
IC106	8-752-202-20	IC CX22022	
IC107	8-757-991-00	IC CX-7991	
IC108	8-759-202-67	IC CX20117	

COIL

Ref.No	Part No.	Description	Remark
L101	1-408-795-21	INDUCTOR CHIP 330UH	
L110	1-408-777-00	INDUCTOR CHIP 10UH	
L111	1-408-781-00	INDUCTOR CHIP 22UH	
L119	1-408-765-21	INDUCTOR CHIP 1UH	
L120	1-408-765-21	INDUCTOR CHIP 1UH	
L121	1-408-792-00	INDUCTOR CHIP 180UH	
L122	1-408-789-21	INDUCTOR CHIP 100UH	
L123	1-408-781-00	INDUCTOR CHIP 22UH	
L124	1-408-790-00	INDUCTOR CHIP 120UH	
L125	1-410-167-41	INDUCTOR CHIP 820UH	
L126	1-408-790-00	INDUCTOR CHIP 120UH	
L127	1-408-781-00	INDUCTOR CHIP 22UH	
L129 ⚠	1-408-785-21	INDUCTOR CHIP 47UH	
L130	1-408-776-00	INDUCTOR CHIP 8.2UH	
L131	1-408-795-21	INDUCTOR CHIP 330UH	
L134	1-408-785-21	INDUCTOR CHIP 47UH	
L135	1-408-790-00	INDUCTOR CHIP 120UH	
L136	1-408-777-00	INDUCTOR CHIP 10UH	
L137	1-408-785-21	INDUCTOR CHIP 47UH	
L138	1-408-791-00	INDUCTOR CHIP 150UH	
L142	1-410-167-41	INDUCTOR CHIP 820UH	
L143	1-408-789-21	INDUCTOR CHIP 100UH	

VARIABLE COIL

Ref.No	Part No.	Description	Remark
LV102	1-459-546-11	COIL, VARIABLE 150UH	
LV103	1-404-594-11	COIL, VARIABLE	

TRANSISTOR

Ref.No	Part No.	Description	Remark
Q101	8-729-312-22	TRANSISTOR 2SA1122	
Q102	8-729-901-03	TRANSISTOR DTC144WK	
Q103	8-729-901-03	TRANSISTOR DTC144WK	
Q104	8-729-901-03	TRANSISTOR DTC144WK	
Q108	8-729-100-66	TRANSISTOR 2SC1623	
Q109	8-729-901-03	TRANSISTOR DTC144WK	
Q113	8-729-901-03	TRANSISTOR DTC144WK	
Q114	8-729-900-99	TRANSISTOR DTA144WK	
Q115	8-729-116-06	TRANSISTOR 2SK160-K6	
Q116	8-729-901-03	TRANSISTOR DTA144WK	
Q117	8-729-100-66	TRANSISTOR 2SC1623	
Q118	8-729-100-66	TRANSISTOR 2SC1623	
Q119	8-729-312-22	TRANSISTOR 2SA1122	
Q120	8-729-100-66	TRANSISTOR 2SC1623	
Q121	8-729-312-22	TRANSISTOR 2SA1122	
Q122	8-729-901-03	TRANSISTOR DTC144WK	
Q123	8-729-900-61	TRANSISTOR DTA114ES	
Q124	8-729-312-22	TRANSISTOR 2SA1122	
Q125	8-729-100-66	TRANSISTOR 2SC1623	
Q126	8-729-312-22	TRANSISTOR 2SA1122	
Q127	8-729-100-66	TRANSISTOR 2SC1623	
Q128	8-729-312-22	TRANSISTOR 2SA1122	
Q130	8-729-901-03	TRANSISTOR DTC144WK	
Q131	8-729-900-53	TRANSISTOR DTC114EK	
Q132	8-729-312-22	TRANSISTOR 2SA1122	

RESISTOR

Ref.No	Part No.	Description	Remark
R101	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R102	1-216-043-00	METAL CHIP 560 5% 1/10W	
R103	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description				Remark
R104	1-216-043-00	METAL CHIP	560	5%	1/10W	
R105	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R106	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R107	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R108	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R109	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R110	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R111	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R112	1-216-041-00	METAL CHIP	470	5%	1/10W	
R113	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R114	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R115	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R116	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R117	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R118	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R119	1-216-131-11	METAL CHIP	2.7M	5%	1/10W	
R120	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R121	1-216-095-00	METAL CHIP	82K	5%	1/10W	
R122	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R123	1-247-831-00	CARBON	1K	5%	1/6W	
R124	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R125	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R126	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R127	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R128	1-216-047-00	METAL CHIP	820	5%	1/10W	
R129	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R130	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R145	1-216-022-00	METAL CHIP	75	5%	1/10W	
R146	1-216-101-00	METAL CHIP	150K	5%	1/10W	
R147	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R148	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R149	1-216-043-00	METAL CHIP	560	5%	1/10W	
R150	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R151	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R153	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R155	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R157	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R158	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R159	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R160	1-216-027-00	METAL CHIP	120	5%	1/10W	
R161	1-216-035-00	METAL CHIP	270	5%	1/10W	
R162	1-216-039-00	METAL CHIP	390	5%	1/10W	
R163	1-216-039-00	METAL CHIP	390	5%	1/10W	
R164	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R165	1-216-041-00	METAL CHIP	470	5%	1/10W	
R175	1-216-041-00	METAL CHIP	470	5%	1/10W	
R181	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R182	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R183	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R184	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R185	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R186	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R187	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R188	1-216-025-00	METAL CHIP	100	5%	1/10W	
R189	1-216-009-00	METAL CHIP	22	5%	1/10W	
R190	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R191	1-216-027-00	METAL CHIP	120	5%	1/10W	
R192	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R193	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R194	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R195	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R196	1-216-087-00	METAL CHIP	39K	5%	1/10W	
R197	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R198	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R199	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R200	1-216-045-00	METAL CHIP	680	5%	1/10W	
R201	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R202	1-216-037-00	METAL CHIP	330	5%	1/10W	
R203	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R204	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R205	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R206	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R207	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R208	1-216-117-00	METAL CHIP	680K	5%	1/10W	
R209	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R211	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R212	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R213	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R214	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R215	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R216	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R217	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R218	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R219	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R220	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R221	1-216-039-00	METAL CHIP	390	5%	1/10W	
R222	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R225	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R226	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R227	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R228	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R229	1-216-025-00	METAL CHIP	100	5%	1/10W	
R230	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R231	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R232	1-216-043-00	METAL CHIP	560	5%	1/10W	
R233	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R234	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R235	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R237	1-216-045-00	METAL CHIP	680	5%	1/10W	
R238	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R239	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R240	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R241	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R242	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R243	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R244	1-216-097-00	METAL CHIP	100K	5%	1/10W	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description				Remark
R245	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R246	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R247	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R248	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R249	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R250	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R251	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R252	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R253	1-216-103-00	METAL CHIP	180K	5%	1/10W	
R254	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R255	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R256	1-216-041-00	METAL CHIP	470	5%	1/10W	
R257	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R258	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R259	1-216-043-00	METAL CHIP	560	5%	1/10W	
R260	1-216-095-00	METAL CHIP	82K	5%	1/10W	
R261	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R262	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R263	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R264	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R265	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R266	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R268	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R269	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R270	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R271	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R272	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R273	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R274	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R275	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R276	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R277	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R278	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R279	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R280	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R281	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R282	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R283	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R284	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R285	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R287	1-216-021-00	METAL CHIP	68	5%	1/10W	
R289	1-216-015-00	METAL CHIP	39	5%	1/10W	
R290	1-216-015-00	METAL CHIP	39	5%	1/10W	
R291	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R292	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R293	1-216-117-00	METAL CHIP	680K	5%	1/10W	
R294	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R295	1-216-117-00	METAL CHIP	680K	5%	1/10W	
R296 ⚠	1-216-025-00	METAL CHIP	100	5%	1/10W	
R297 ⚠	1-216-025-00	METAL CHIP	100	5%	1/10W	
R298	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R299	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R300	1-216-081-00	METAL CHIP	22K	5%	1/10W	

Ref.No	Part No.	Description				Remark
R301	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R302	1-216-039-00	METAL CHIP	390	5%	1/10W	
R304	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R305	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R306	1-216-025-00	METAL CHIP	100	5%	1/10W	
R307	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R308 ⚠	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R309 ⚠	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R310	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R311	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R312	1-216-295-00	METAL CHIP	0	5%	1/10W	
R314	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R315	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R316	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R319	1-216-039-00	METAL CHIP	390	5%	1/10W	
R320	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R323	1-216-033-00	METAL CHIP	220	5%	1/10W	
R336	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R337	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R341	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R342	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R343	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R344	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R345	1-216-031-00	METAL CHIP	180	5%	1/10W	
R346	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R347	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R349	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R350	1-216-041-00	METAL CHIP	470	5%	1/10W	
R355	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R357	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R358	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R359	1-216-043-00	METAL CHIP	560	5%	1/10W	

VARIABLE RESISTOR

RV101	1-228-869-00	RES, ADJ, METAL GLAZE 470
RV102	1-228-874-00	RES, METAL GLAZE 22K
RV103	1-228-874-00	RES, METAL GLAZE 22K
RV104	1-228-828-00	RES, METAL GLAZE 4.7K
RV105	1-228-874-00	RES, METAL GLAZE 22K
RV106	1-228-874-00	RES, METAL GLAZE 22K
RV107	1-228-874-00	RES, METAL GLAZE 22K
RV108	1-228-874-00	RES, METAL GLAZE 22K
RV109	1-228-874-00	RES, METAL GLAZE 22K
RV110	1-228-873-00	RES, METAL GLAZE 10K
RV111	1-228-874-00	RES, METAL GLAZE 22K
RV112	1-228-834-11	RES, METAL GLAZE 220K
RV113	1-228-832-00	RES, METAL GLAZE 47K

CRYSTAL

X101	1-527-345-00	CRYSTAL, OSCILLATOR
X102	1-567-345-21	VIBRATOR, CRYSTAL
X103	1-567-347-11	OSCILLATOR, CERAMIC

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

EX-3

Ref.No	Part No.	Description	Remark
	*A-7070-154-A	EX-3 BOARD, COMPLETE (AEP, E MODEL) **************************************	
	*A-7070-168-A	EX-3 BOARD, COMPLETE (UK MODEL) **********************************	

CAPACITOR

Ref.No	Part No.	Description	Remark
C361	1-135-100-21	TANTAL. CHIP 6.8MF 20% 6.3V	
C362	1-163-088-00	CERAMIC CHIP 5PF 0.25PF 50V	
C363	1-163-100-00	CERAMIC CHIP 20PF 5% 50V	
C364	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C365	1-163-085-00	CERAMIC CHIP 2PF 0.25PF 50V	
C366	1-163-093-00	CERAMIC CHIP 10PF 5% 50V	
C367	1-163-121-00	CERAMIC CHIP 150PF 5% 50V	
C368	1-163-109-00	CERAMIC CHIP 47PF 5% 50V	
C369	1-163-095-00	CERAMIC CHIP 12PF 5% 50V	
C370	1-135-096-21	TANTAL. CHIP 4.7MF 20% 10V	
C371	1-163-035-00	CERAMIC CHIP 0.047MF 50V	
C372	1-163-119-00	CERAMIC CHIP 120PF 5% 50V	
C373	1-163-107-00	CERAMIC CHIP 39PF 5% 50V	
C374	1-163-112-00	CERAMIC CHIP 62PF 5% 50V	
C375	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C376	1-163-114-00	CERAMIC CHIP 75PF 5% 50V	
C377	1-135-096-21	TANTAL. CHIP 4.7MF 20% 10V	
C378	1-163-121-00	CERAMIC CHIP 150PF 5% 50V	
C379	1-163-113-00	CERAMIC CHIP 68PF 5% 50V	
C380	1-163-109-00	CERAMIC CHIP 47PF 5% 50V	
C381	1-135-100-21	TANTAL. CHIP 6.8MF 20% 6.3V	
C382	1-163-093-00	CERAMIC CHIP 10PF 5% 50V	
C383	1-135-100-21	TANTAL. CHIP 6.8MF 20% 6.3V	
C384	1-163-119-00	CERAMIC CHIP 120PF 5% 50V	
C385	1-163-015-00	CERAMIC CHIP 0.0033MF 10% 50V	
C386	1-163-033-00	CERAMIC CHIP 0.022MF 10% 25V	
C387	1-163-021-00	CERAMIC CHIP 0.01MF 50V	

DIODE

Ref.No	Part No.	Description	Remark
D361	8-719-101-23	DIODE 1SS123	
D362	8-719-101-23	DIODE 1SS123	

COIL

Ref.No	Part No.	Description	Remark
L361	1-410-219-31	INDUCTOR CHIP 180UH	
L362	1-410-220-31	INDUCTOR CHIP 220UH	
L363	1-410-220-31	INDUCTOR CHIP 220UH	
L364	1-410-214-31	INDUCTOR CHIP 68UH	
L365	1-410-216-31	INDUCTOR CHIP 100UH	
L366	1-410-212-51	INDUCTOR CHIP 47UH	
L367	1-410-213-51	INDUCTOR CHIP 56UH	
L368	1-410-214-31	INDUCTOR CHIP 68UH	
L369	1-410-216-31	INDUCTOR CHIP 100UH	
L370	1-410-213-51	INDUCTOR CHIP 56UH	
L371	1-410-215-31	INDUCTOR CHIP 82UH	
L372	1-410-213-51	INDUCTOR CHIP 56UH	
L373	1-410-213-51	INDUCTOR CHIP 56UH	
L374	1-410-192-51	INDUCTOR CHIP 1UH	

TRANSISTOR

Ref.No	Part No.	Description	Remark
Q361	8-729-312-22	TRANSISTOR 2SA1122	
Q362	8-729-312-22	TRANSISTOR 2SA1122	
Q363	8-729-100-66	TRANSISTOR 2SC1623	
Q364	8-729-100-66	TRANSISTOR 2SC1623	
Q365	8-729-312-22	TRANSISTOR 2SA1122	
Q366	8-729-100-66	TRANSISTOR 2SC1623	
Q367	8-729-100-66	TRANSISTOR 2SC1623	
Q368	8-729-312-22	TRANSISTOR 2SA1122	
Q370	8-729-901-03	TRANSISTOR DTC144WK	
Q373	8-729-901-03	TRANSISTOR DTC144WK	
Q374	8-729-900-99	TRANSISTOR DTA144WK	

RESISTOR

Ref.No	Part No.	Description	Remark
R361	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
R362	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R363	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R364	1-216-039-00	METAL CHIP 390 5% 1/10W	
R365	1-216-041-00	METAL CHIP 470 5% 1/10W	
R366	1-216-041-00	METAL CHIP 470 5% 1/10W	
R367	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R368	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R369	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R370	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R371	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R372	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R373	1-216-039-00	METAL CHIP 390 5% 1/10W	
R374	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R375	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R376	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R377	1-216-045-00	METAL CHIP 680 5% 1/10W	
R378	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R379	1-216-045-00	METAL CHIP 680 5% 1/10W	
R380	1-216-045-00	METAL CHIP 680 5% 1/10W	
R381	1-216-045-00	METAL CHIP 680 5% 1/10W	
R382	1-216-047-00	METAL CHIP 820 5% 1/10W	
R383	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R384	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R385	1-216-045-00	METAL CHIP 680 5% 1/10W	
R386	1-216-045-00	METAL CHIP 680 5% 1/10W	
R387	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R388	1-216-025-00	METAL CHIP 100 5% 1/10W	
R389	1-216-039-00	METAL CHIP 390 5% 1/10W	
R390	1-216-041-00	METAL CHIP 470 5% 1/10W	
R391	1-216-001-00	METAL CHIP 10 5% 1/10W	
R392	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R393	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R394	1-216-041-00	METAL CHIP 470 5% 1/10W	
R395	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R397	1-216-025-00	METAL CHIP 100 5% 1/10W	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description		Remark
	*1-616-826-11	TK-2 BOARD ***********		
		CAPACITOR		
C351	1-163-137-00	CERAMIC CHIP 680PF	10%	50V
		DIODE		
D351	8-719-100-03	DIODE 1S2835		
		TRANSISTOR		
Q351	8-729-901-03	TRANSISTOR DTC144WK		
Q352	8-729-901-03	TRANSISTOR DTC144WK		
Q353	8-729-100-03	TRANSISTOR 2SC1623		
		RESISTOR		
R351	1-216-073-00	METAL CHIP 10K	5%	1/10W
R352	1-216-119-00	METAL CHIP 820K	5%	1/10W
R353	1-216-097-00	METAL CHIP 100K	5%	1/10W
R354	1-216-109-00	METAL CHIP 330K	5%	1/10W
**************	**************	**************	******	******
	*A-7060-267-A	HD-5 BOARD, COMPLETE (AEP, E MODEL) ************************************		
	*A-7060-281-A	HD-5 BOARD, COMPLETE (UK MODEL) ********************************		
		CAPACITOR		
C801	1-124-224-00	ELECT 47MF	20%	6.3V
C803	1-163-077-00	CERAMIC CHIP 0.1MF		50V
C804	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C805	1-124-233-00	ELECT 10MF	20%	16V
C808	1-135-100-21	TANTAL. CHIP 6.8MF	20%	6.3V
C810	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C811	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C812	1-135-083-00	TANTAL. CHIP 0.47MF	20%	25V
C813	1-135-083-00	TANTAL. CHIP 0.47MF	20%	25V
C814	1-163-077-00	CERAMIC CHIP 0.1MF		50V
C815	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V
C817	1-124-255-00	ELECT 1MF	20%	50V
C818	1-163-077-00	CERAMIC CHIP 0.1MF		50V
C819	1-163-333-91	CERAMIC CHIP 820PF	5%	50V
C820	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C821	1-124-255-00	ELECT 1MF	20%	50V
C822	1-124-569-11	ELECT 56MF	20%	16V
C823	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C824	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C825	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C826	1-123-321-00	ELECT 220MF	20%	16V
C827	1-127-491-00	ELECT(SOLID) 22MF	20%	10V
C828	1-124-565-00	ELECT 56MF	20%	6.3V
C829	1-124-565-00	ELECT 56MF	20%	6.3V
C830	1-124-565-00	ELECT 56MF	20%	6.3V
C831	1-163-077-00	CERAMIC CHIP 0.1MF		50V
C833	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V
		CONNECTOR		
CN005	1-564-610-11	CONNECTOR, BOARD TO BOARD		
CN006	1-564-610-11	CONNECTOR, BOARD TO BOARD		
CN803	*1-564-012-00	PIN, CONNECTOR 2P		
CN806	*1-564-027-00	PIN, CONNECTOR 2P		
CN807	*1-562-952-11	CONNECTOR 12P		
		DIODE		
D801	8-719-105-90	DIODE RD5.6M-B1		
D810	8-719-105-82	DIODE RD5.1M-B2		
D811	8-719-106-16	DIODE RD6.8M-B1		
D812	8-719-108-01	DIODE 1SS153		
D813	8-719-981-01	DIODE ERA81-004		
		IC		
IC801	8-759-201-01	IC TC4066BF		
IC802	⚠8-759-908-95	IC TL1451CNS		
IC803	8-759-100-93	IC UPC393G2		
		COIL		
L801	1-421-801-11	COIL, CHOKE 60UH		
L802	1-421-799-11	COIL, CHOKE 108UH		
L803	1-408-417-00	MICRO INDUCTOR 47UH		
L804	1-421-826-11	COIL, CHOKE 12UH		
L805	1-408-417-00	MICRO INDUCTOR 47UH		
		TRANSISTOR		
Q801	8-729-100-66	TRANSISTOR 2SC1623		
Q803	8-729-901-01	TRANSISTOR DTC144EK		
Q807	8-729-159-64	TRANSISTOR 2SD596		
Q811	8-729-700-08	TRANSISTOR NJL7141E		
Q812	8-729-113-33	TRANSISTOR 2SB733-4		
Q813	8-729-900-53	TRANSISTOR DTC114EK		
Q814	8-729-100-66	TRANSISTOR 2SC1623		
Q815	8-729-901-00	TRANSISTOR DTC124EK		
Q816	8-729-901-05	TRANSISTOR DTA124EK		
Q817	8-729-901-00	TRANSISTOR DTC124EK		
Q818	8-729-901-00	TRANSISTOR DTC124EK		
Q819	8-729-100-66	TRANSISTOR 2SC1623		
Q820	8-729-100-76	TRANSISTOR 2SA812		
Q821	⚠8-729-105-29	TRANSISTOR 2SA1385		
		RESISTOR		
R801	1-216-053-00	METAL CHIP 1.5K	5%	1/10W
R802	1-216-077-00	METAL CHIP 15K	5%	1/10W
R803	1-216-087-00	METAL CHIP 39K	5%	1/10W
R804	1-216-035-00	METAL CHIP 270	5%	1/10W
R805	1-216-021-00	METAL CHIP 68	5%	1/10W
R806	1-216-105-00	METAL CHIP 220K	5%	1/10W
R807	1-216-089-00	METAL CHIP 47K	5%	1/10W
R808	1-216-089-00	METAL CHIP 47K	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description				Remark
R809	1-216-103-00	METAL CHIP	180K	5%	1/10W	
R810	1-216-103-00	METAL CHIP	180K	5%	1/10W	
R811	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R812	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R813	1-216-119-00	METAL CHIP	820K	5%	1/10W	
R814	1-216-107-00	METAL CHIP	270K	5%	1/10W	
R815	1-216-119-00	METAL CHIP	820K	5%	1/10W	
R816	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R821	1-216-087-00	METAL CHIP	39K	5%	1/10W	
R822	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R823	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R824	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R825	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R826	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R827	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R828	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R829	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R830	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R831	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R832	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R837	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R838	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R839	1-216-190-00	METAL CHIP	470	5%	1/8W	
R840	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R841	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R842	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R843	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R844	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R845	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R846	1-216-117-00	METAL CHIP	680K	5%	1/10W	
R847	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R848	1-216-033-00	METAL CHIP	220	5%	1/10W	
R849	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R850	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R851	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R852	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R853	1-216-046-00	METAL CHIP	750	5%	1/10W	
R854	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R855	1-216-060-00	METAL CHIP	3K	5%	1/10W	
R857	1-216-295-00	METAL CHIP	0	5%	1/10W	
R858	1-216-295-00	METAL CHIP	0	5%	1/10W	
R859	1-216-295-00	METAL CHIP	0	5%	1/10W	
R860	1-216-190-00	METAL CHIP	470	5%	1/8W	
R861	1-216-295-00	METAL CHIP	0	5%	1/10W	

VARIABLE RESISTOR

Ref.No	Part No.	Description	Remark
RV801	1-228-892-00	RES, ADJ, METAL GLAZE 22K	
RV802	1-230-869-11	RES, ADJ, METAL GLAZE 4.7K	
RV803	1-230-867-11	RES, ADJ, METAL GLAZE 1K	

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Ref.No	Part No.	Description				Remark
	*A-7060-261-A	RS-15 BOARD, COMPLETE (AEP, E MODEL)				
		**************************************				
	*A-7060-275-A	RS-15 BOARD, COMPLETE (UK MODEL)				
		*********************************				
	*3-686-814-01	HOLDER, REEL SENSOR				

CAPACITOR

Ref.No	Part No.	Description				Remark
C501	1-124-234-00	ELECT	22MF	20%	10V	
C601	1-124-225-00	ELECT	100MF	20%	6.3V	

CONNECTOR

Ref.No	Part No.	Description	Remark
CN515	*1-564-012-00	PIN, CONNECTOR 2P	
CN516	*1-564-012-00	PIN, CONNECTOR 2P	

DIODE

Ref.No	Part No.	Description	Remark
D501	8-719-100-03	DIODE 1S2835	
D502	8-719-100-03	DIODE 1S2835	
D503	8-719-100-03	DIODE 1S2835	

IC

Ref.No	Part No.	Description	Remark
IC501	8-759-910-70	IC MB3763PS	
IC502	8-759-908-81	IC MB3763PF	

DIODE

Ref.No	Part No.	Description	Remark
PH601	8-719-751-42	DIODE NJL5141E	
PH602	8-719-751-42	DIODE NJL5141E	
PH603	8-719-751-42	DIODE NJL5141E	

TRANSISTOR

Ref.No	Part No.	Description	Remark
Q601	8-729-100-66	TRANSISTOR 2SC1623	
Q602	8-729-100-66	TRANSISTOR 2SC1623	
Q603	8-729-100-66	TRANSISTOR 2SC1623	
Q604	8-729-100-66	TRANSISTOR 2SC1623	
Q605	8-729-100-66	TRANSISTOR 2SC1623	
Q606	8-729-100-66	TRANSISTOR 2SC1623	
Q607	8-729-100-66	TRANSISTOR 2SC1623	

RESISTOR

Ref.No	Part No.	Description				Remark
R601	1-216-180-00	METAL CHIP	180	5%	1/8W	
R602	1-216-180-00	METAL CHIP	180	5%	1/8W	
R603	1-216-160-00	METAL CHIP	27	5%	1/8W	
R604	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R605	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R606	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R607	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R608	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R609	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R610	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R611	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R612	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R613	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	

When indicating parts by reference number, please include the board name.

RS-15 FE-12 EP-4 FU-42 LD-1 MS-4 LS-9 SC-5

Ref.No	Part No.	Description	Remark
R614	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R615	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R616	1-216-180-00	METAL CHIP 180 5% 1/8W	

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Ref.No	Part No.	Description	Remark
	*A-7060-262-A	FE-12 BOARD, COMPLETE (AEP, E MODEL)	
	*A-7060-276-A	FE-12 BOARD, COMPLETE (UK MODEL)	
		CAPACITOR	
C101	1-163-021-00	CERAMIC CHIP 0.01MF 50V	
C102	1-163-021-00	CERAMIC CHIP 0.01MF 50V	
C103	1-163-111-00	CERAMIC CHIP 56PF 5% 50V	
C104	1-163-119-00	CERAMIC CHIP 120PF 5% 50V	
C105	1-163-021-00	CERAMIC CHIP 0.01MF 50V	
C106	1-163-034-00	CERAMIC CHIP 0.033MF 50V	
		CONNECTOR	
CN113	*1-564-002-00	PIN, CONNECTOR 3P	
		COIL	
L101	1-408-969-21	MICRO INDUCTOR 8.2UH	
L102	⚠1-408-948-21	MICRO INDUCTOR 220UH	
		TRANSISTOR	
Q101	8-729-100-76	TRANSISTOR 2SA812	
Q102	8-729-117-54	TRANSISTOR 2SA1175	
		RISISTOR	
R101	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R102	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R103	1-216-037-00	METAL CHIP 330 5% 1/10W	
R104	1-216-041-00	METAL CHIP 470 5% 1/10W	
R105	1-216-308-00	METAL CHIP 4.7 5% 1/10W	

***

Ref.No	Part No.	Description	Remark
	*1-616-897-11	EP-4 BOARD	
		JACK	
J491	1-507-929-21	JACK	
		RESISTOR	
R450	1-247-777-00	CARBON 5.6 5% 1/6W	

***

Ref.No	Part No.	Description	Remark
	*1-616-898-11	FU-42 BOARD	
	*1-533-146-00	HOLDER, FUSE	
		CONNECTOR	
CN902	*1-560-894-00	PIN, CONNECTOR 6P	
		DIODE	
D901	8-719-815-55	DIODE 1S1555	
		FUSE	
F901	⚠1-532-237-11	FUSE TIME-LAG T3.15A 250V	
F902	⚠1-532-285-11	FUSE TIME-LAG T1.25A 250V	
		RELAY	
RY901	1-515-585-11	RELAY	

MC-Service

***

Ref.No	Part No.	Description	Remark
	*A-7070-024-A	LD-1 BOARD, COMPLETE	
		DIODE	
D901	8-719-928-54	DIODE GL-450S	

***

Ref.No	Part No.	Description	Remark
		MS-4 BOARD	
		CAPACITOR	
C901	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
		CONNECTOR	
CN905	*1-564-613-11	PIN, CONNECTOR (HOOK TYPE)	

***

Ref.No	Part No.	Description	Remark
		LS-9 BOARD	
		CONNECTOR	
CN904	*1-564-613-21	PIN, CONNECTOR (HOOK TYPE)	

***

Ref.No	Part No.	Description	Remark
	*1-616-893-11	SC-5 BOARD	
		CAPACITOR	
C802	1-124-470-11	ELECT 470MF 20% 6.3V	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

MISCELLANEOUS
****

Ref.No	Part No.	Description	Remark
	A-7040-003-A	M-SW ASSY	
	X-3686-549-1	L-SW ASSY	
	1-535-535-11	TERMINAL, SHAFT GROUND	
	8-835-121-01	MOTOR, DC (DNR-6602A)	
C902	1-161-073-11	CAP, CERAMIC 0.033MF	
M901	⚠A-7040-009-A	MOTOR ASSY, L (LOADING)	
M902	8-838-077-01	MOTOR, DC (BHF-2800B) (CAPSTAN)	
M903	⚠8-835-110-01	MOTOR, DC (DNR-5301A) (CONTROL)	
PM901	⚠1-454-377-11	SOLENOID, PLUNGER (BRAKE)	
S901	1-553-226-00	SWITCH, LEAF (CASSETTE LOCK)	
S902	1-554-942-11	SWITCH, PUSH (RECOG)	

****

ACCESSORIES AND PACKING MATERIALS
****

Part No.	Description	Remark
1-552-957-00	SWITCH, ANTENNA (ANS-33)	
1-556-893-21	CORD ASSY, COAXIAL	
2-219-930-00	DRIVER, 1	
*3-695-949-01	CUSHION	
*3-695-954-21	INDIVIDUAL CARTON	
3-701-626-00	BAG, POLYETHYLENE	
3-760-722-11	MANUAL, INSTRUCTION	
3-760-722-41	MANUAL, INSTRUCTION (AEP, E MODEL)	
3-760-722-51	MANUAL, INSTRUCTION (AEP, E MODEL)	
3-760-722-61	MANUAL, INSTRUCTION (E MODEL)	
3-849-119-00	BAG, PROTECTION	

****

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

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ADJUSTMENT
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1. MECHANISM SECTION ADJUSTMENT

1-1. PREPARATION ITEMS FOR MECHANISM SECTION CHECKING, ADJUSTMENT AND REPLACEMENT

See **2. DISASSEMBLY** to remove cabinets and boards.

1-1-1. Cassette Compartment Assembly

1) Refer to the "OPENING OF THE HD-5 BOARD" then open the HD-5 board ❶ .
2) Refer to the "OPENING OF THE SV-14 BOARD" then open the SV-14 board ❷ .
3) Remove the screw ❸ and the leaf switch ❹ .
4) Remove the four screws ❺ and the cassette compartment assembly ❻ .

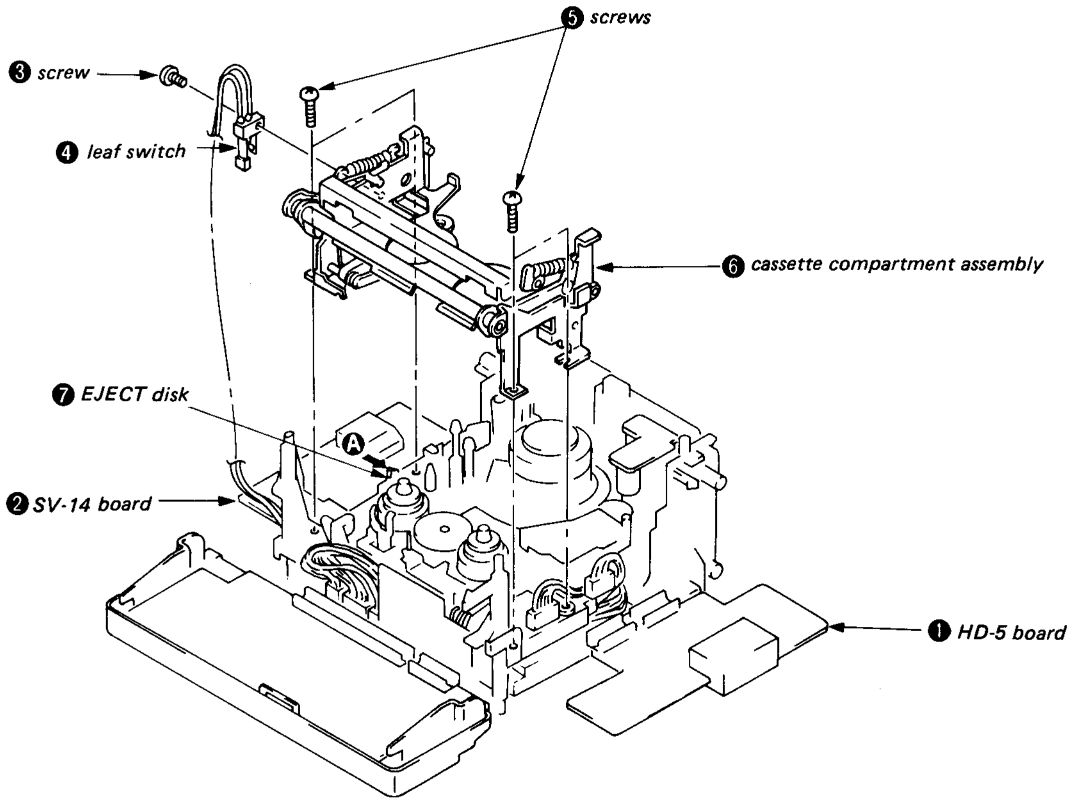

❺ screws
❸ screw
❹ leaf switch
❻ cassette compartment assembly
❼ EJECT disk
Ⓐ
❷ SV-14 board
❶ HD-5 board

Fig. 1-1

2. Remounting

1) Remount the cassette compartment assembly ❻ and tighten the screw ❺ referring to Fig. 1-2. (Push the eject disc ❼ toward the arrow Ⓐ to avoid the disc hitting the cassette compartment assembly.) (See Fig. 1-1.)
2) Remount the leaf switch (S901) ❹ with a screw ❸. (See Fig. 1-1.)
3) Remount the SV-14 Board ❷. (See Fig. 1-1.)
4) Remount the HD-5 Board ❶. (See Fig. 1-1.)

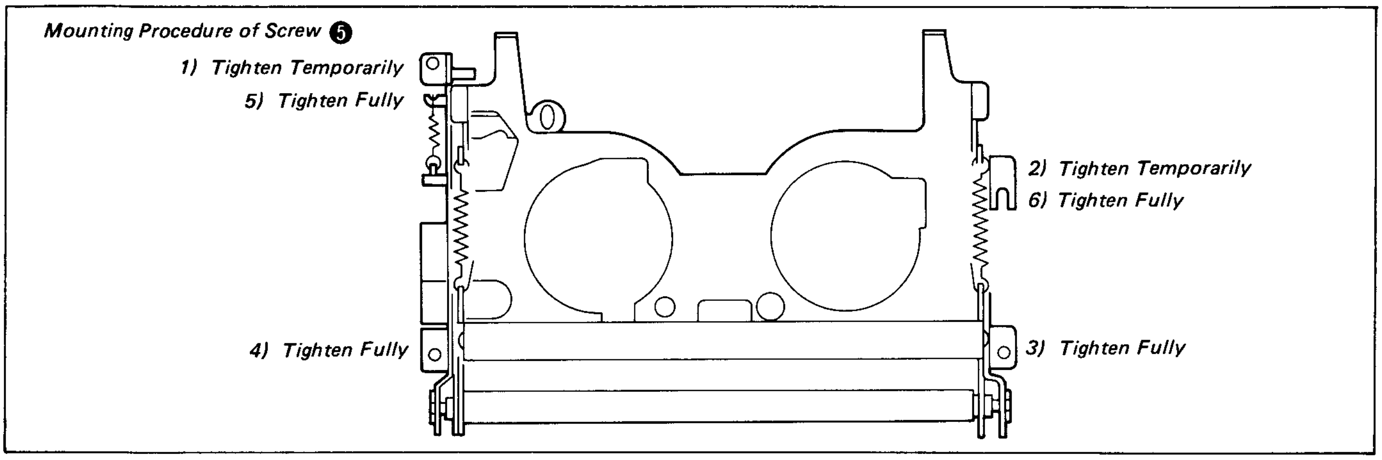

Mounting Procedure of Screw ❺
1) Tighten Temporarily
5) Tighten Fully
4) Tighten Fully
2) Tighten Temporarily
6) Tighten Fully
3) Tighten Fully

Fig. 1-2

1-1-2. Operating without Cassette Compartment Assembly and Tape

Note: Be care that the set may not operate if there is a strong light source near the set.
Turn off power, then turn on when the eject lamp flashes.

1. Loading

1) Connect the power supply ❶ and turn on power.
2) Place a tape on the pin of the RECOG SW assembly ❷.
3) Turn on the leaf switch (S901) ❸. (See Fig. 1-3.)

2. Play back

1) Take the steps required in 1.
2) Place a rubber band ❹ between the S and T reels.
3) Cover a cap ❺ on the LED assembly.
4) Press the PLAYBACK button. Push the tension regulator arm assembly ❻ toward the arrow Ⓐ when the T reel starts rotating. (The tension regulator band is released, and the S reel rotates.)
5) Press the STOP button to stop. (See Fig. 1-3.)

3. Recording

1) Take the steps required in 1.
2) Place a rubber band ❹ between the S and T reels.
3) Cover a cap ❺ on the LED assembly.
4) Press the RECORD button. Push the tension regulator arm assembly ❻ toward the arrow Ⓐ when the T reel starts rotating. (The tension regulator band is released, and the S reel rotates.)
5) Press the STOP button to stop. (See Fig. 1-3.)

4. Ejecting

1) Press the EJECT button.

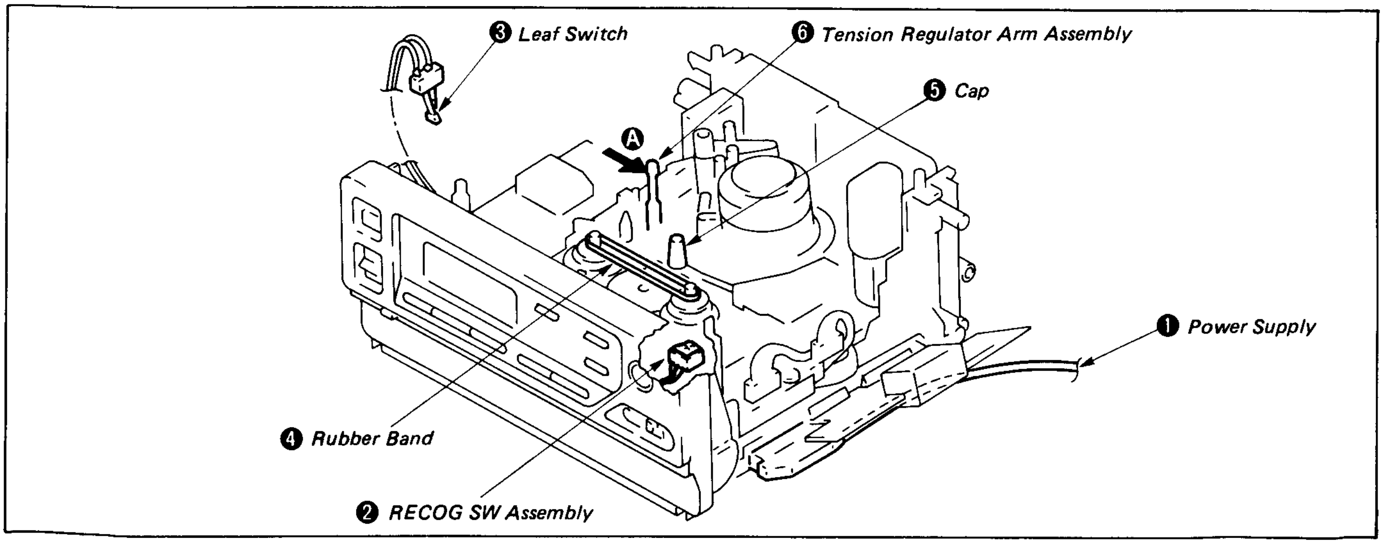

❸ Leaf Switch
❻ Tension Regulator Arm Assembly
❺ Cap
Ⓐ
❶ Power Supply
❹ Rubber Band
❷ RECOG SW Assembly

Fig. 1-3

1-1-3. Mode Selector Operation

1. Selector Parts (External View)

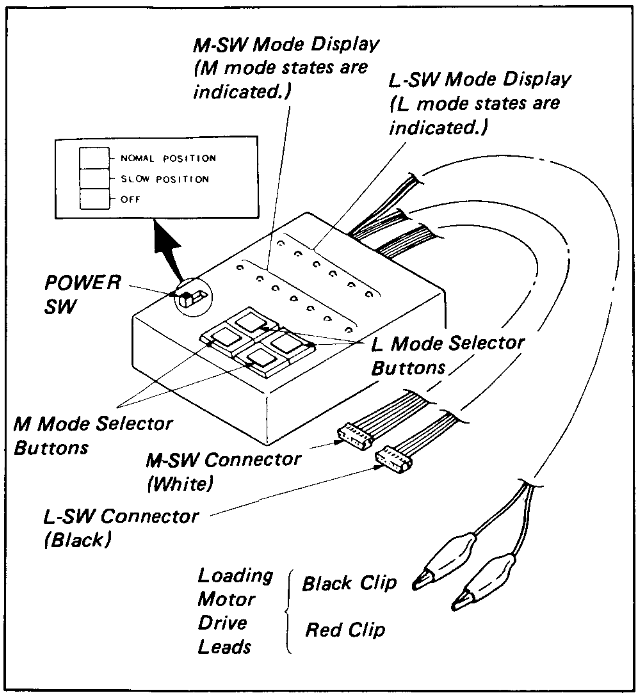

M-SW Mode Display (M mode states are indicated.)
L-SW Mode Display (L mode states are indicated.)
NOMAL POSITION
SLOW POSITION
OFF
POWER SW
L Mode Selector Buttons
M Mode Selector Buttons
M-SW Connector (White)
L-SW Connector (Black)
Loading Motor Drive Leads
Black Clip
Red Clip

Fig. 1-4

2. Connection

1) Plug the M-SW connector (6P connector, 6 harnesses, white) to the MS-4 Board (CN905) of the set.
2) Plug the L-SW connector (6P connector, 4 harnesses, black) to the LS-9 Board (CN904) of the set.
3) Connect each of red and black clip of the loading motor to each of red and gray loading motor drive lead wire, respectively. (See Fig. 1-4.)

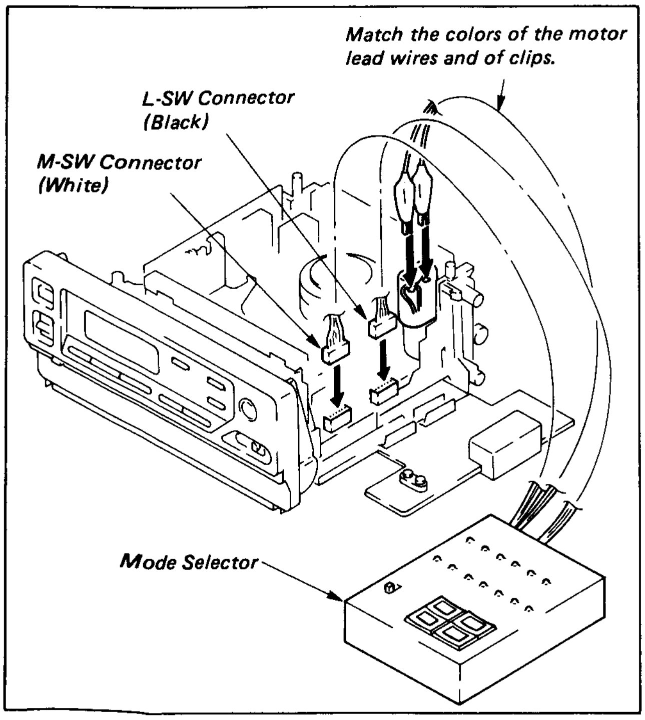

Match the colors of the motor lead wires and of clips.
L-SW Connector (Black)
M-SW Connector (White)
Mode Selector

Fig. 1-5

3. Precautions

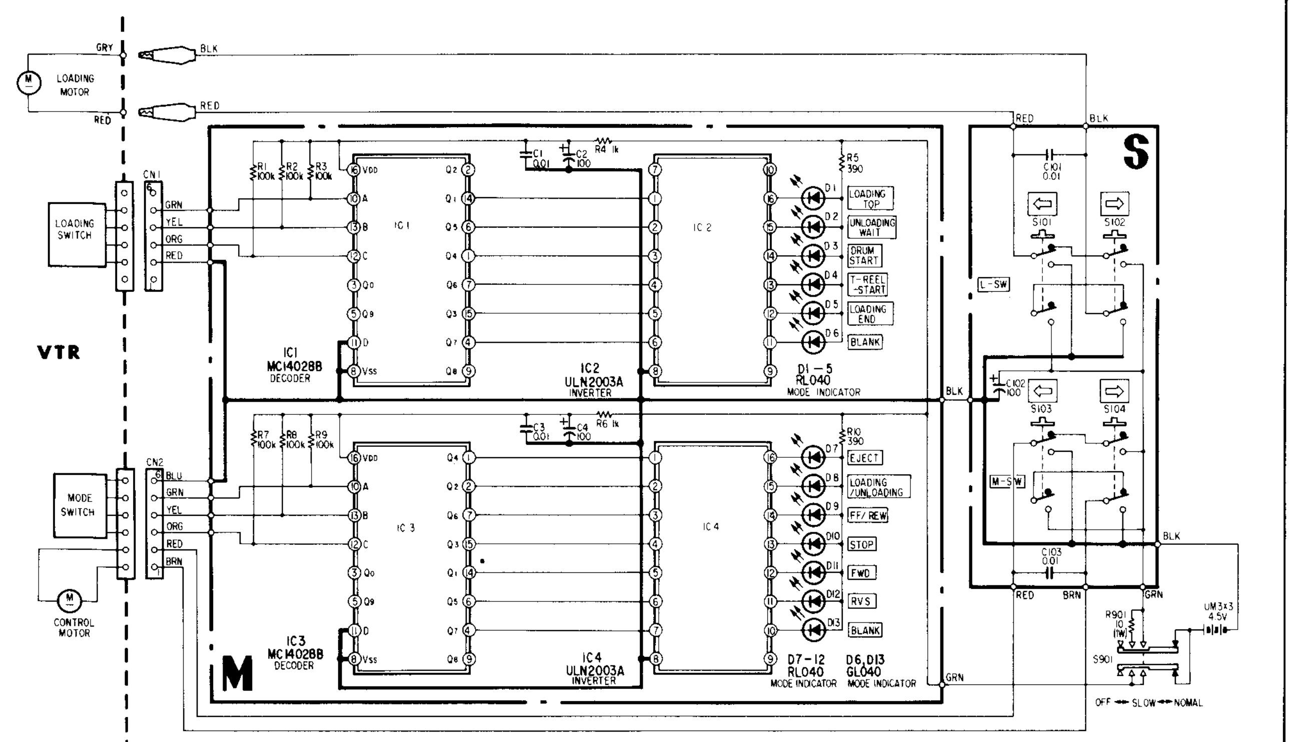
1) Make sure to set the M-SW mode to LOADING/UNLOADING when operating L-SW.
2) Make sure to set the L-SW mode to TOP or END when operating M-SW.

4. Operation

"BLANK" lights if each mode state is not set up during selection regardless of the L or M mode.

1) L Mode
   - Lighted to right sequentially from LOADING TOP to LOADING END when the righthand side button of the L mode selector buttons is kept pressing.
   - Keep pressing the selector button on the lefthand side to set up the desired mode in order to change from LOADING END to LOADING TOP.
   - The L mode operates more slowly in the slow position than in the normal position.
2) M Mode
   - Set L-SW to LOADING TOP to eject.
   - Set L-SW to LOADING END to change from FF/REW to RVS or from RVS to FF/REW.
   - Keep pressing the righthand side selector button of the M MODE to light to right sequentially from EJECT to RVS.
   - Keep pressing the selector button on the lefthand side to set up the desired mode in order to change from RVS to EJECT.

5. Mode Selector Schematic Diagram


GRY
BLK
LOADING MOTOR
RED
VTR
CN1
GRN
YEL
ORG
RED
LOADING SWITCH
CN2
BLU
BRN
MODE SWITCH
CONTROL MOTOR
R1 100k
R2 100k
R3 100k
C1 0.01
C2 100
R4 1k
IC1
MC14028B
DECODER
IC2
ULN2003A
INVERTER
R5 390
D1 LOADING TOP
D2 UNLOADING WAIT
D3 DRUM START
D4 T-REEL -START
D5 LOADING END
D6 BLANK
D1-5
RL040
MODE INDICATOR
R7 100k
R8 100k
R9 100k
C3 0.01
C4 100
R6 1k
IC3
MC14028B
DECODER
IC4
ULN2003A
INVERTER
R10 390
D7 EJECT
D8 LOADING /UNLOADING
D9 FF/REW
D10 STOP
D11 FWD
D12 RVS
D13 BLANK
D7-12
RL040
MODE INDICATOR
D6,D13
GL040
MODE INDICATOR
M
S
C101 0.01
S101
S102
L-SW
C102 100
S103
S104
M-SW
C103 0.01
RED
BRN
GRN
BLK
R901 10 (1W)
UM3×3 4.5V
S901
OFF ◄► SLOW ◄► NOMAL

M-SW
(IC 3)

DECODER INPUT			MODE	LED NO.
C	B	A		
0	0	0		
0	0	1	FWD	D11
0	1	0	LOADING/UNLOADING	D8
0	1	1	STOP	D10
1	0	0	EJECT	D7
1	0	1	RVS	D12
1	1	0	FF/REW	D9
1	1	1	BLANK	D13

0: INPUT LEVEL L
1: INPUT LEVEL H

L-SW
(IC 1)

DECODER INPUT			MODE	LED NO.
C	B	A		
0	0	0		
0	0	1	LOADING TOP	D1
0	1	0		
0	1	1	LOADING END	D5
1	0	0	DRUM START	D3
1	0	1	UNLOADING WAIT	D2
1	1	0	T-REEL-START	D4
1	1	1	BLANK	D6

SWITCH		DIRECTION OF MOTOR REVOLUTION
⇦	⇨	
OFF	OFF	STOP
ON	OFF	⇦
OFF	ON	⇨

⇦ L-SW LOADING END ← LOADING TOP
M-SW RVS ← EJECT

⇨ L-SW LOADING TOP ← LOADING END
M-SW EJECT ← RVS

6. Mode Selector Parts List

Ref. No.	Part No.	Description		
	CAPACITOR			
C1	1-108-579-00	MYLAR	0.01μF	50V
C2	1-123-333-00	ELECT	100μF	24V
C3	1-108-579-00	MYLAR	0.01μF	50V
C4	1-123-333-00	ELECT	100μF	24V
C101	1-108-579-00	MYLAR	0.01μF	50V
C103	1-108-579-00	MYLAR	0.01μF	50V
	DIODE			
D1	8-179-812-31	DIODE	RL040	
D2	8-179-812-31	DIODE	RL040	
D3	8-179-812-31	DIODE	RL040	
D4	8-179-812-31	DIODE	RL040	
D5	8-179-812-31	DIODE	RL040	
D6	8-719-812-33	DIODE	GL040	
D7	8-179-812-31	DIODE	RL040	
D8	8-179-812-31	DIODE	RL040	
D9	8-179-812-31	DIODE	RL040	
D10	8-179-812-31	DIODE	RL040	
D11	8-179-812-31	DIODE	RL040	
D12	8-179-812-31	DIODE	RL040	
D13	8-719-812-33	DIODE	GL040	

Ref. No.	Part No.	Description		
	IC			
IC1	8-759-240-28	IC	TC4028BP	
IC2	8-759-120-03	IC	μPA2003A	
IC3	8-759-240-28	IC	TC4028BP	
IC4	8-759-120-03	IC	μPA2003A	
	RESISTOR			
R1	1-247-179-00	CARBON	100K	¼W
R2	1-247-179-00	CARBON	100K	¼W
R3	1-247-179-00	CARBON	100K	¼W
R4	1-247-131-00	CARBON	1K	¼W
R5	1-247-121-00	CARBON	390	¼W
R6	1-247-131-00	CARBON	1K	¼W
R7	1-247-179-00	CARBON	100K	¼W
R8	1-247-179-00	CARBON	100K	¼W
R9	1-247-179-00	CARBON	100K	¼W
R10	1-247-121-00	CARBON	390	¼W
R901	1-214-594-00	METAL	10	1W

1-2. PERIODIC CHECKING AND MAINTENANCE ITEMS

Maintenance and periodic checking should be performed as described below to demonstrate the set functions and performance fully, as well as for the sake of the machine and tapes. Provide the following maintenance work after a repair regardless of the duration of operation by the user.

1-2-1. Cleaning Rotary Drum Assembly

1) Lightly place chamois leather (Ref. No. J-2) moisted with a cleaning solution (Ref. No. J-1) on the rotary upper drum assembly and slowly rotate the rotary upper drum assembly counterclockwise by a finger to clean.

Note: Do not rotate the drum by the motor by turning on power or by rotating clockwise by a finger.
The chances of the head chip being damaged are very high if chamois leather is moved perpendicular to the head chip. Absolutely no cleaning method other than that described above should be used.

1-2-2. Tape Guide System Cleaning

1) Set up the cassette compartment assembly in an eject state and clean the tape guide system (No. 1 to 11 guides, capstan spindle and pinch roller) with chamois leather moisted with a cleaning solution. (See Fig. 1-6.)

1-2-3. Drive System Cleaning

1) Clean the drive system (timing belt and reel table surfaces) with a cloth moisted with a cleaning solution.

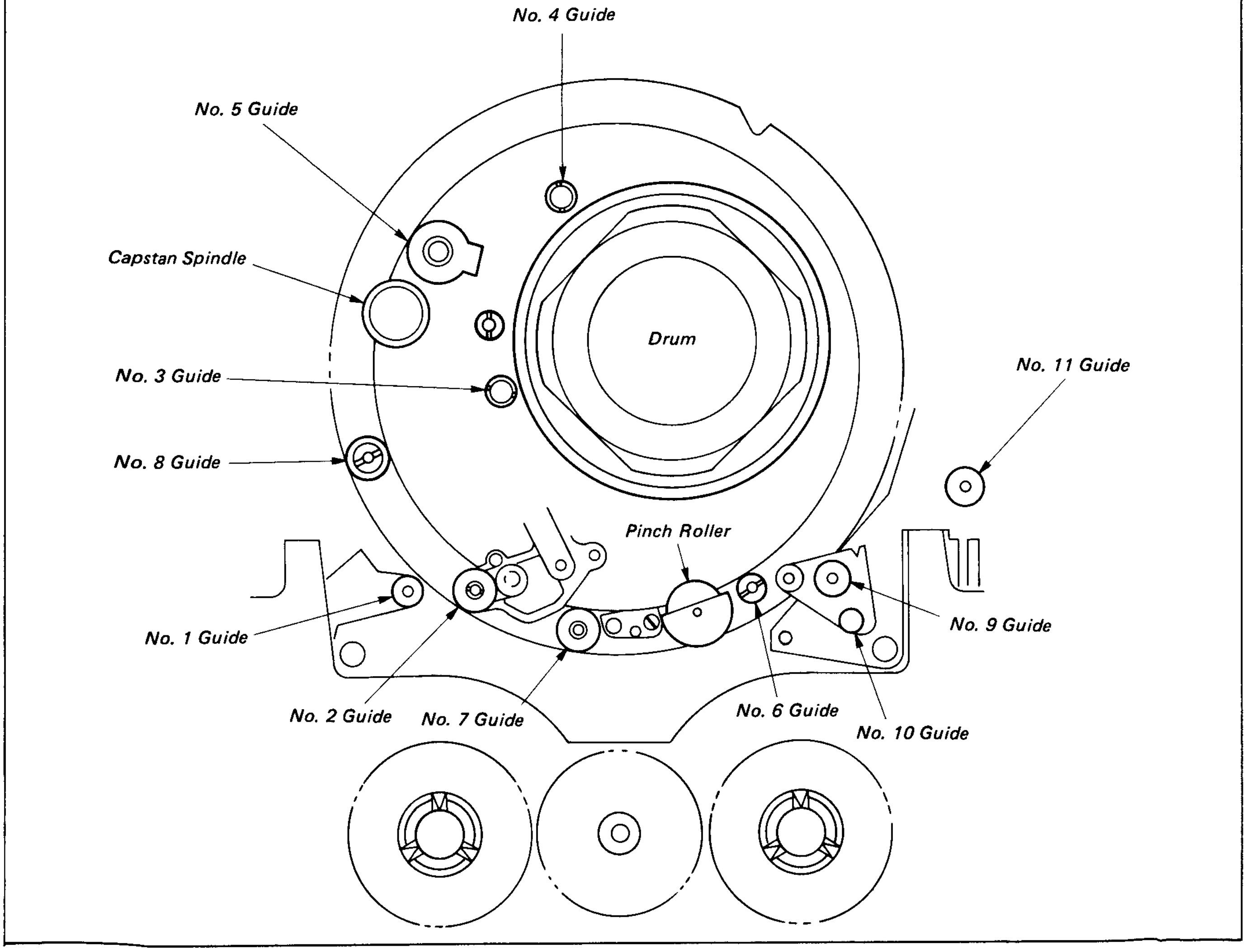

No. 4 Guide
No. 5 Guide
Capstan Spindle
Drum
No. 3 Guide
No. 11 Guide
No. 8 Guide
Pinch Roller
No. 9 Guide
No. 1 Guide
No. 2 Guide
No. 7 Guide
No. 6 Guide
No. 10 Guide

Fig. 1-6

1-2-4. Periodic Check Items

Provide the following maintenance and checking depending on the user use duration.

○Cleaning ◎Oiling ★Replacement ☆Checking

Maintenance and Check Part		Hours in Operation (h)										Remarks
		500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	
Tape Guide System	Cleaning of tape running surfaces	○	○	○	○	○	○	○	○	○	○	Avoid oil
	Cleaning and demagnetizing of rotary drum assembly	○	○	○	○	○	○	○	○	○	○	Avoid oil
Drive System	L motor belt	○	○	○	○	○	○	○	★	○	○	3-686-546-01 Replace here, or every two years
	Timing belt	○	○	○	○	○	○	○	○	○	○	3-686-646-01
	Plunger solenoid	—	—	—	○	—	—	—	○	—	—	1-454-377-11
	Capstan bearing	—	◎	—	◎	—	◎	—	◎	—	◎	Absolutely avoid oil on tape running surfaces.
	Loading motor	—	☆	—	☆	—	☆	—	☆	—	☆	A-7040-009-A
	Control motor	—	☆	—	☆	—	☆	—	☆	—	☆	8-835-110-01
Performance Checking	Abnormal sound	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Back tension measurement	—	☆	—	☆	—	☆	—	☆	—	☆	
	Brake system	—	☆	—	☆	—	☆	—	☆	—	☆	
	FWD RVS } Torque measurement	—	☆	—	☆	—	☆	—	☆	—	☆	

Note: Replace parts in overhaul taking the foregoing items into consideration.

Note: SONY Oil

- Be sure to use SONY oil, always. (Various kinds of trouble may occur if the oil viscosity, etc. change.)
  SONY Oil. Parts No. 7-661-088-61
- Be sure to use SONY oil completely free from dust, etc. mixed in it when oiling the bearings. (The bearings may wear and may be seized if oil mixed with dust, etc. is used.)
- One drop of oil is approximately the amount of oil on tip of a stick 2mm in diameter as shown in the diagram. (See Fig. 1-7.)

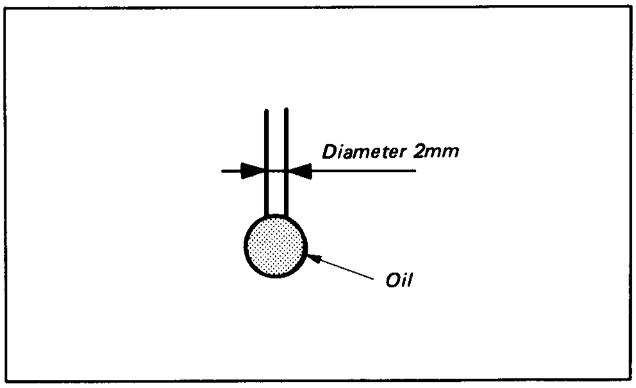


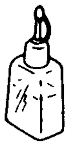
Fig. 1-7

1-2-5. Summary of Servicing Tools

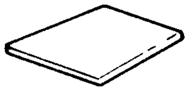
Ref. No.	Name	Part Code	Fixture No.	Use
J-1	Cleaning Fluid	Y-2031-001-0	——	
J-2	Chamois Cloth	2-034-697-00	——	
J-3	Head Demagnetizer		——	
J-4	Dental Mirror (handle) Dental Mirror (mirror)	J-6080-029-A J-6080-030-1	SL-5052	Tape Path
J-5	Alignment Tape (WR5-1C)	8-967-995-06		Tape Path
J-6	Dial Tension Gauge	J-6080-827-A		Measuring torques
J-7	Tension measuring reel	J-6080-831-A		With ϕ30 tape
J-8	Tension measuring reel	J-6080-832-A		With ϕ16 string
J-9	No. 10 gear phase matching	J-6080-823-A	GD-2047	
J-10	Rotary DRUM JIG	(Packaged with the rotary upper drum for repairs and replacement.)		
J-11	No. 6 Guide Lock JIG	J-6080-826-A		
J-12	FWD, RVS Take-up Torque Cassette	J-6080-824-A	GD-2086	
J-13	Mode Selector	J-6080-825-A		The whole
J-14	Video Head Checker	7-732-080-01	SL-5151	

Other equipment: Oscilloscope
Analog Tester (20kΩ)

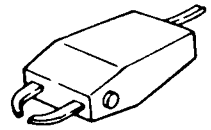
J-1



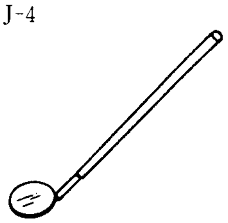
J-2



J-3



J-4



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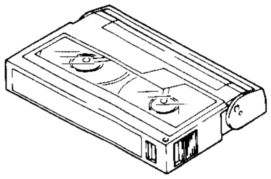
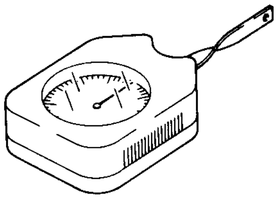
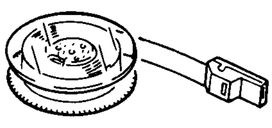


J-6



J-7



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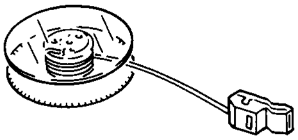
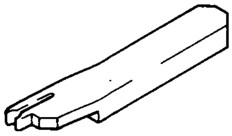
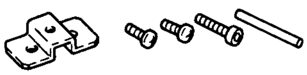


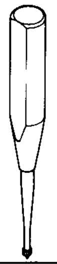
J-9



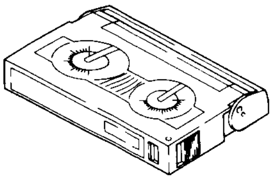
J-10 (Packaged with the rotary upper drum for repairs and replacement.)



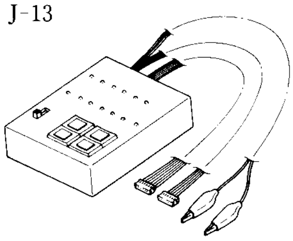
J-11



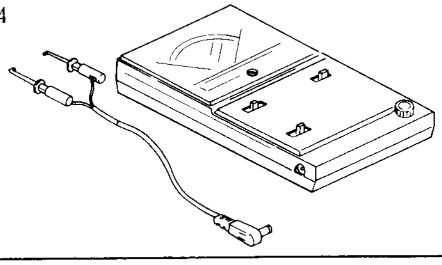
J-12



J-13



J-14



1-3. MECHANISM SECTION CHECKING, ADJUSTMENT AND REPLACEMENT

Note:
- Use a mode selector (Ref. No. J-13) to check, adjust, and replace this mechanism section.
- The modes in ☐ are set up by pressing the mode selector buttons.

1-3-1. S Reel Table Assembly

1. Removal

1) Remove the cassette compartment assembly as instructed in 1-1-1.
2) Set up the FF/REW mode.
3) Remove the screw ❶ and reel table stopper ❷ .
4) Remove the REV brake ❸ .
5) Remove the S reel table assembly ❹ . (See Fig. 1-8.)

Note: Be sure to hold the upper click part in hand when removing. (See the Note in Fig. 1-8).

2. Remounting

1) Oil half a drop of oil on the upper spherical part of the spindle ❺ .
2) Move the S main brake assembly ❻ toward the arrow Ⓐ .
3) Remount the S reel table assembly ❹ not to touch the tension regulator band assembly ❼ .

Note: Be sure to hold the upper click part in hand when mounting. (See the Note in Fig. 1-8.)

4) Remount the REV brake ❸ .
5) Remount the reel table stopper ❷ and tighten the screw ❶ . (See Fig. 1-8.)
6) Set up the LOADING/UNLOADING mode.
7) Remount the cassette compartment assembly as instructed in 1-1-1.

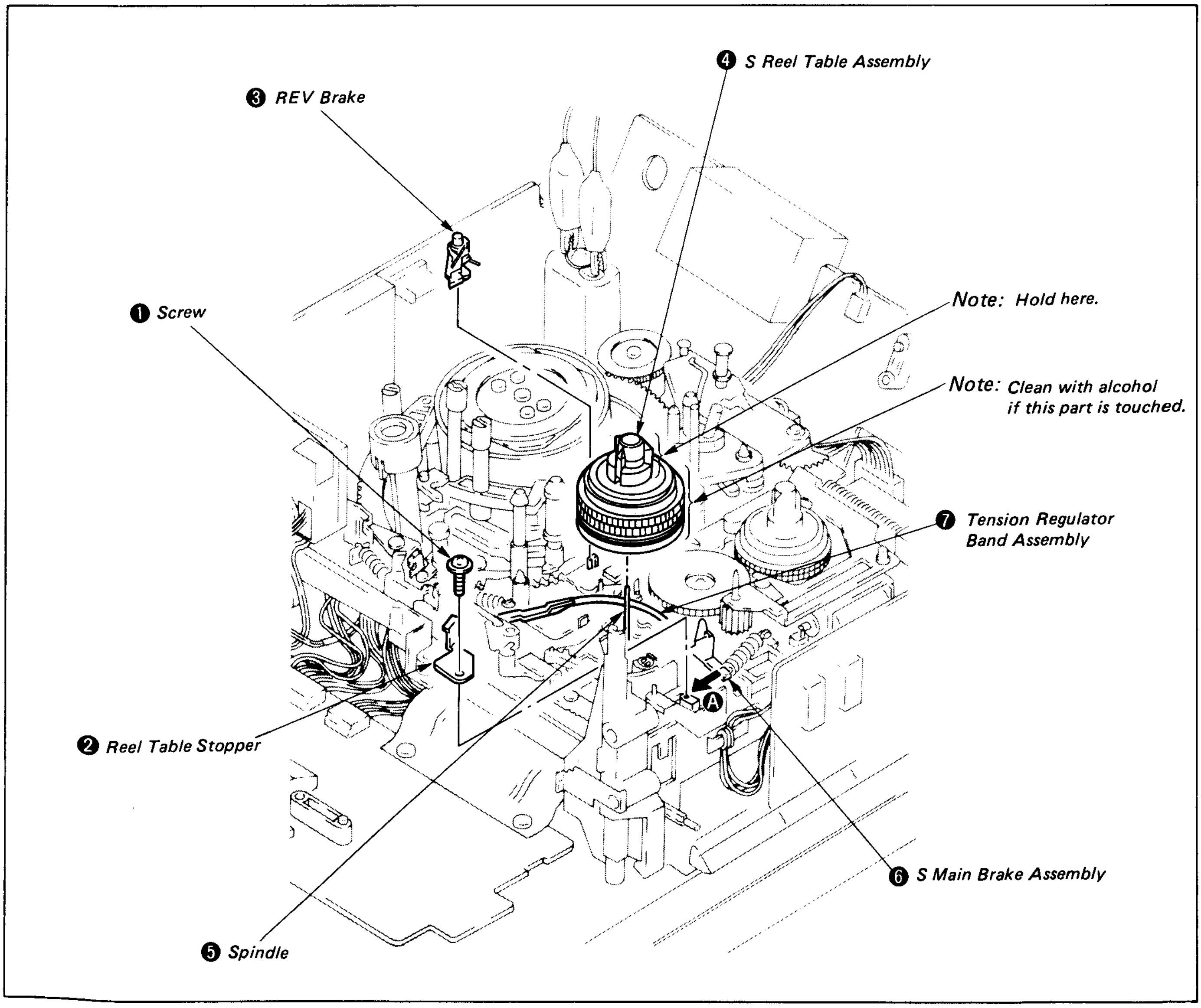

❹ S Reel Table Assembly
❸ REV Brake
❶ Screw
Note: Hold here.
Note: Clean with alcohol if this part is touched.
❼ Tension Regulator Band Assembly
Ⓐ
❷ Reel Table Stopper
❻ S Main Brake Assembly
❺ Spindle

Fig. 1-8

1-3-2. T Reel Table Assembly

1. Removal

1) Remove the cassette compartment assembly as instructed in 1-1-1.
2) Set up the UNLOADING WAIT mode.
3) Hook the spring ❷ tying the T soft brake ❶ on the click of the lock slider.
4) Remove the stopper washer ❸ and T soft brake ❶ .
5) Set up the EJECT mode.
6) Move the drive gear (B) ❹ toward the arrow Ⓐ .
7) Remove the T reel table assembly ❺ . (See Fig. 1-9.)

Note: Be sure to hold the upper click part in hand when removing. (See the Note in Fig. 1-8.)

2. Remounting

1) Oil half a drop of oil on the upper spherical part of the spindle ❻ .
2) Move the drive gear (B) ❹ toward the arrow Ⓐ . (Check that the EJECT mode is set up.)
3) Remount the T reel table assembly ❺ .
4) Remount the T soft brake ❶ and stop washer ❸ .
5) Rehook the spring ❷ on the click of the T soft brake ❶ . (See Fig. 1-9.)
6) Set up the LOADING TOP and LOADING/UNLOADING modes.
7) Remount the cassette compartment assembly as instructed in 1-1-1.

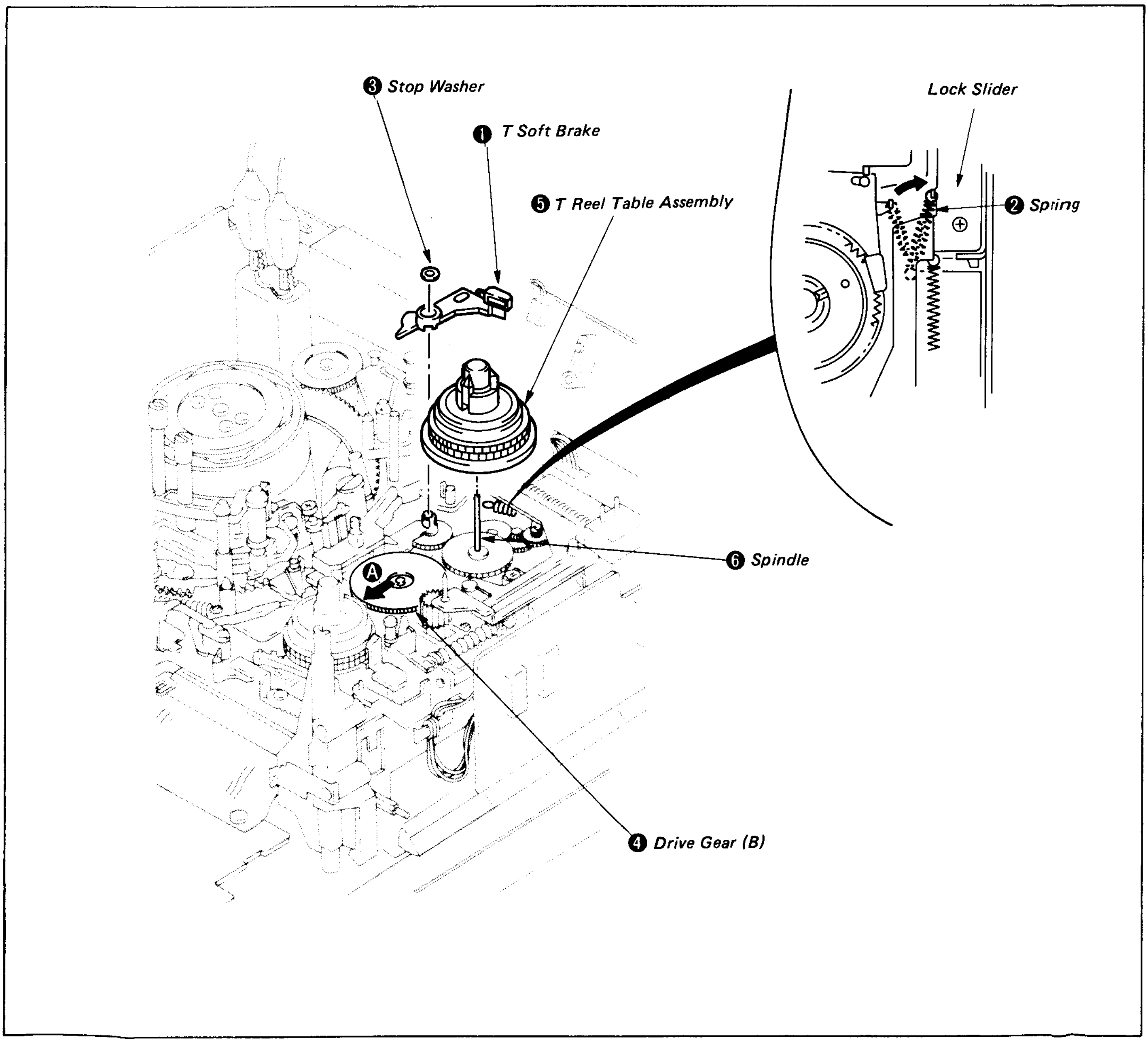


Fig. 1-9

1-3-3. Pinch Press Arm Assembly

1. Removal

1) Hook the spring ❶ on the pinch press arm assembly ❷ .
2) Remove the stop washer ❸ and pinch press arm assembly ❷ . (See Fig. 1-10.)

2. Remounting

1) Oil half a drop of oil on the spindle ❹ .
2) Remount the pinch press arm assembly ❷ and stop washer ❸ .
3) Rehook the spring ❶ on the tension regulator spring hook assembly ❺ . (See Fig. 1-10.)

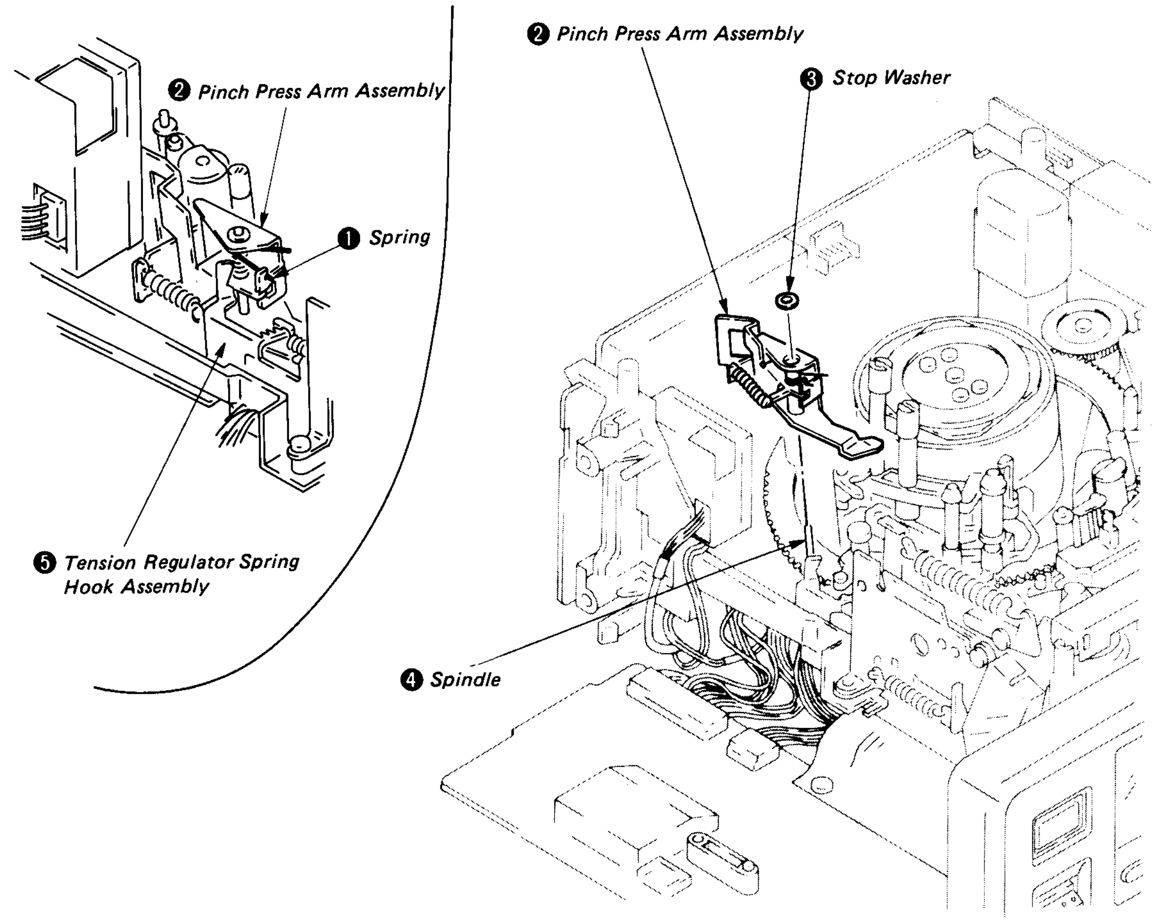

❷ Pinch Press Arm Assembly
❶ Spring
❺ Tension Regulator Spring Hook Assembly
❷ Pinch Press Arm Assembly
❸ Stop Washer
❹ Spindle

Fig. 1-10

1-3-4. Tension Regulator Arm Assembly

1. Removal

1) Remove the cassette compartment assembly as instructed in 1-1-1.
2) Change the hooking position of the spring as instructed in 1) of Removal in 1. of 1-3-3.
3) Remove the spring ❶ . (Write down the spring hooking position).
4) Remove the screw ❷ and tension regulator spring hook assembly ❸ .
5) Set up the FF/REW mode.
6) Disengage the click ❹ of the tension regulator band assembly.
7) Remove the tension regulator arm assembly ❺ . (See Fig. 1-11.)

2. Remounting

1) Oil half a drop of oil on the spindle ❻ .
2) Remount the tension regulator arm assembly ❺ inserting the tension regulator load arm assembly pin ❼ in the cam groove on the rear side of the tension regulator arm assembly ❺ .
3) Reengage the tension regulator band assembly click ❹ . (Do not touch or deform the band.)
4) Set up the LOADING/UNLOADING mode.
5) Remount the tension regulator spring hook assembly ❸ and tighten the screw ❷ .
6) Rehook the spring ❶ in the previous position and lock the screw. (See Fig. 1-11.)
7) Rehook the spring as instructed in 3) of Remounting in 2. of 1-3-3.
8) Remount the cassette compartment assembly as instructed in 1-1-1.

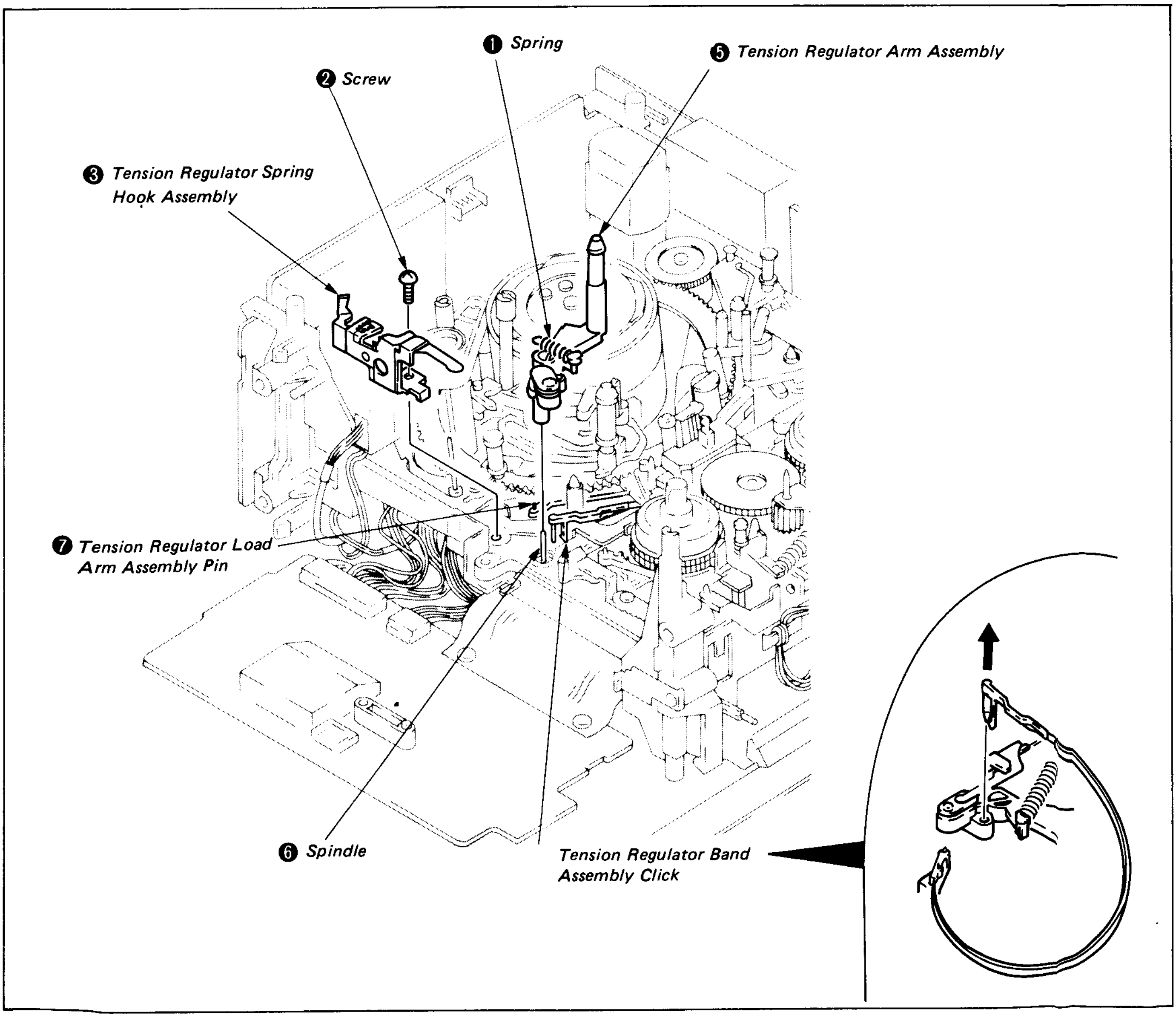

❶ Spring
❺ Tension Regulator Arm Assembly
❷ Screw
❸ Tension Regulator Spring Hook Assembly
❼ Tension Regulator Load Arm Assembly Pin
❻ Spindle
Tension Regulator Band Assembly Click

Fig. 1-11

1-3-5. Tension Regulator Band Assembly

1. Removal

1) Remove the S reel table assembly as instructed in 1-3-1.
2) Disengage the band arm assembly click ❶.
3) Disengage the click ❷ and remove the tension regulator band assembly ❸. (See Fig. 1-12.)

2. Remounting

1) Remount the tension regulator band assembly ❸. (Do not touch or deform the band.)
2) Reengage the band arm assembly click ❶. (See Fig. 1-12.)
3) Remount the S reel table assembly as instructed in 1-3-1.
4) Adjust the FWD back tension as instructed in 1-3-22.

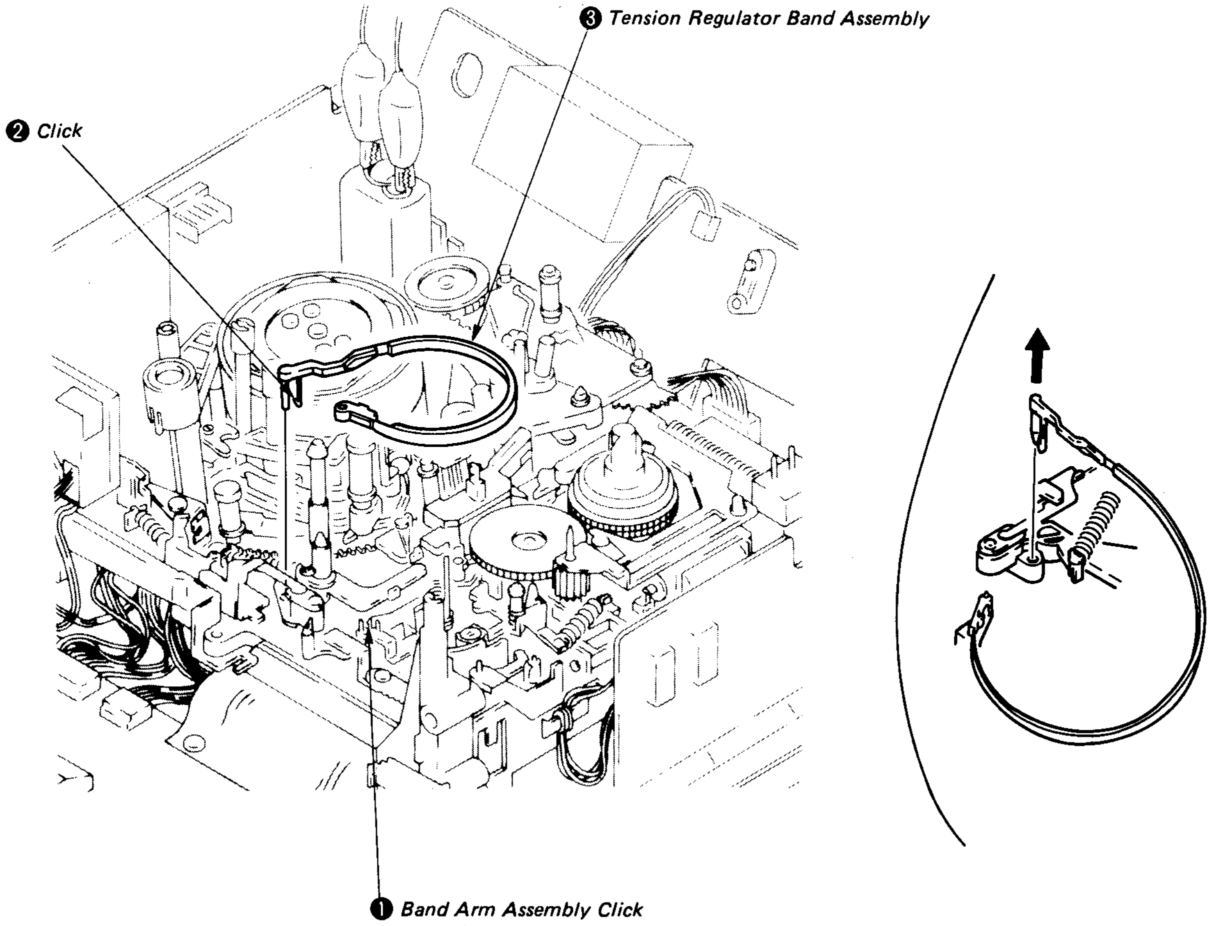

❸ Tension Regulator Band Assembly
❷ Click
❶ Band Arm Assembly Click

Fig. 1-12

1-3-6. Loading Motor Assembly

1. Removal

1) Oepn the MC-8 Board as instructed in section 2 disassembly. (See page 17.)
2) Remove the L motor belt ❶ .
3) Disconnect the connector ❷ CN516 (white) 2P from the RS-15 Board.
4) Remove the screw ❸ and loading motor assembly ❹ . (See Fig. 1-13.)

2. Mounting

1) Remove the loading motor shield plate from the loading motor assembly ❹ which had been mounted on the set.
2) Wind the loading motor shield plate removed in step 1) around the loading motor assembly ❹ . (See Fig. 2-14.)
3) Remount the loading motor assembly ❹ and tighten the two screws ❸ .
4) Reconnect the connector ❷ CN516 (white) 2P to the RS-15 board.
5) Remount the L motor belt ❶ .
6) Reassembly the circuit boards reversing the sequence.

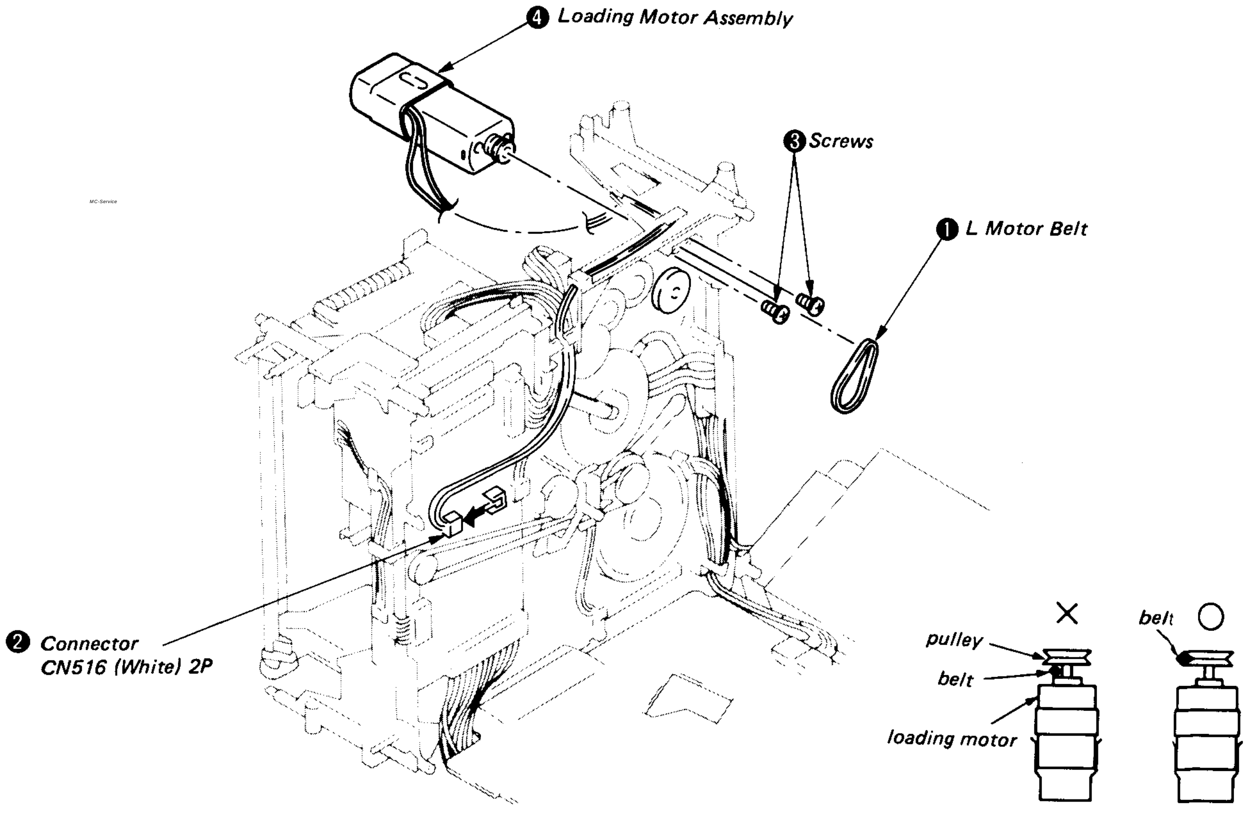
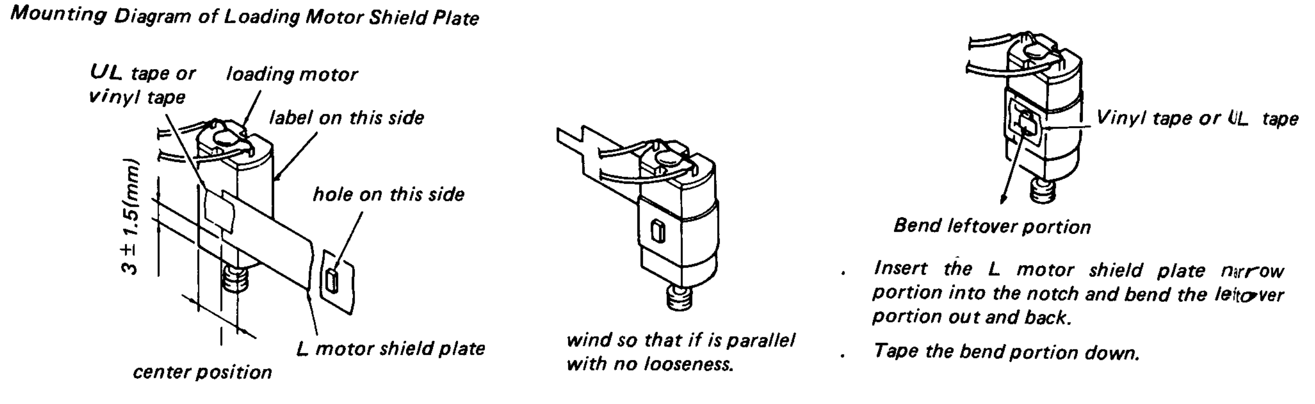

❹ Loading Motor Assembly
❸ Screws
❶ L Motor Belt
❷ Connector CN516 (White) 2P
×
belt
○
pulley
belt
loading motor

Fig. 1-13


Mounting Diagram of Loading Motor Shield Plate
UL tape or vinyl tape
loading motor
label on this side
hole on this side
3 ± 1.5(mm)
L motor shield plate
center position
wind so that if is parallel with no looseness.
Vinyl tape or UL tape
Bend leftover portion

- Insert the L motor shield plate narrow portion into the notch and bend the leftover portion out and back.
- Tape the bend portion down.

Fig. 1-14

1-3-7. Loading Ring Assembly

1. Removal

1) Operate the mode selectors to move the guide base assembly ❶ to immediately before the lock and the No. 2 guide ❷ to the position where the screw of the ring stopper ❸ immediately before the lock. (Do not move the loading ring assembly ⓫ .)
2) Remove the stop washer ❹ and disengage the No. 10 gear assembly ❺ .
3) Remove the screw ❻ , roller retainer ❼ and roller ❽ .
4) Remove the two screws ❾ , ring stopper ❸ and roller ❿ .
5) Remove the loading ring assembly ⓫ in the arrow 🅐 direction. (See Fig. 1-15.)

Note: Care should be taken not to strike the drum when removing the loading ring assembly ⓫ .

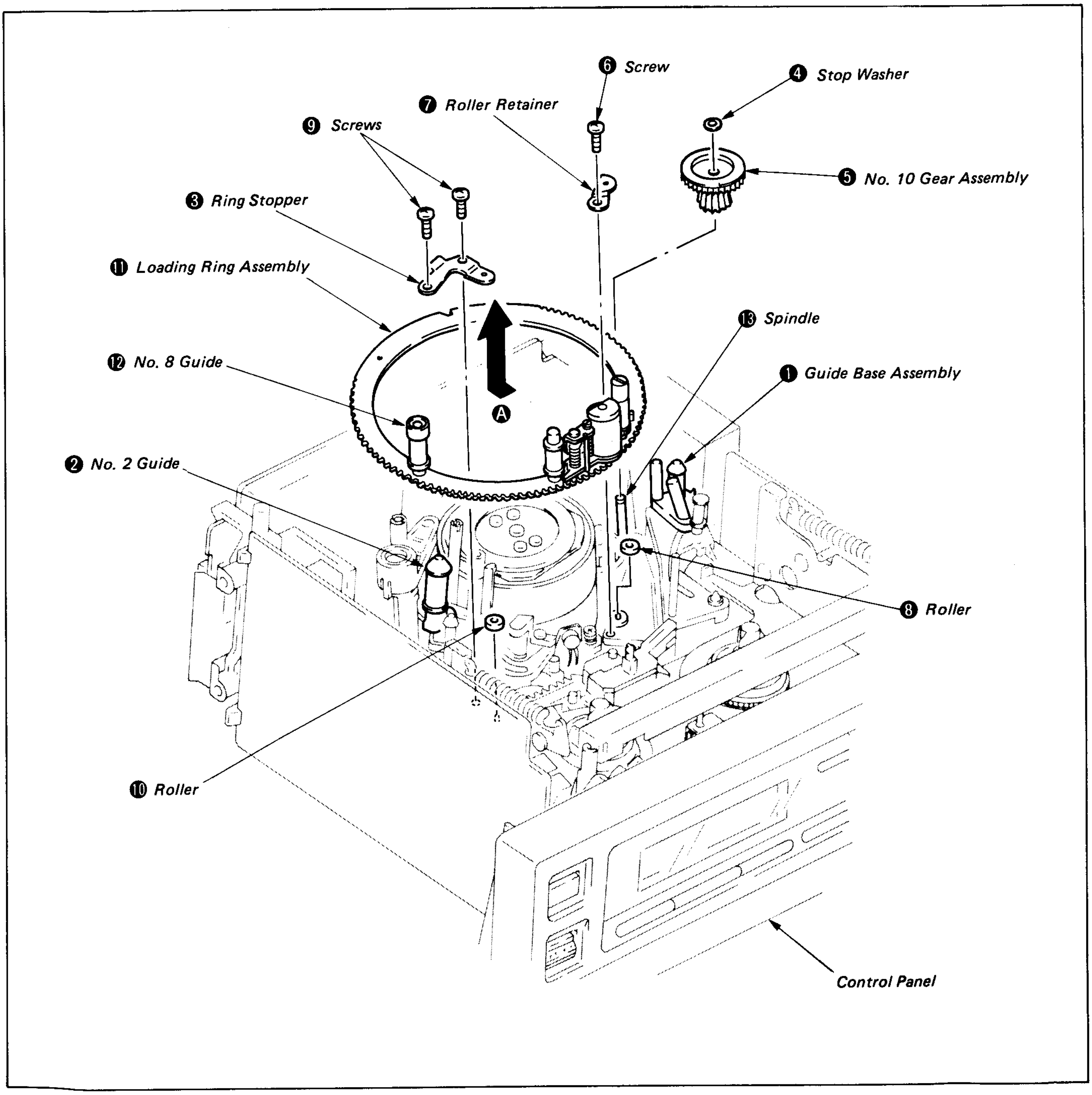

❻ Screw
❹ Stop Washer
❼ Roller Retainer
❾ Screws
❺ No. 10 Gear Assembly
❸ Ring Stopper
⓫ Loading Ring Assembly
⓭ Spindle
⓬ No. 8 Guide
❶ Guide Base Assembly
🅐
❷ No. 2 Guide
❽ Roller
❿ Roller
Control Panel

Fig. 1-15

2. Remounting

1) Remount the loading ring assembly ⓫ in an unthreading condition (with the pinch roller moved to the control panel side). (Check that the loading ring assembly is in the condition of 1) of Removal.)
2) Remount the roller ❿ and ring stopper ❸ and tighten the two screws ❾ . (The No. 8 guide ⓬ should be located near the control panel than the ring stopper ❸ .)
3) Remount the roller ❽ and roller retainer ❼ and tighten the screw ❻ . (Check that the loading ring assembly fits the three rollers.)
4) Oil half a drop of oil on the spindle ⓭ . (See Fig. 1-15.)
5) Check that the tooth of the drive changer is engaging the dent of the L-SW assembly and plug the No. 10 gear phase alignment jig (Ref. No. J-9) (See Fig. 1-16.)
6) Remount the No. 10 gear ❺ and stop washer ❹ pressing the No. 8 guide ⓬ to the ring stopper ❸ .
7) Pull out the No. 10 gear phase alignment jig.
8) Set up the LOADING TOP mode.

Note: Be sure to adjust the tape path as instructed in 1-4 after remounting.

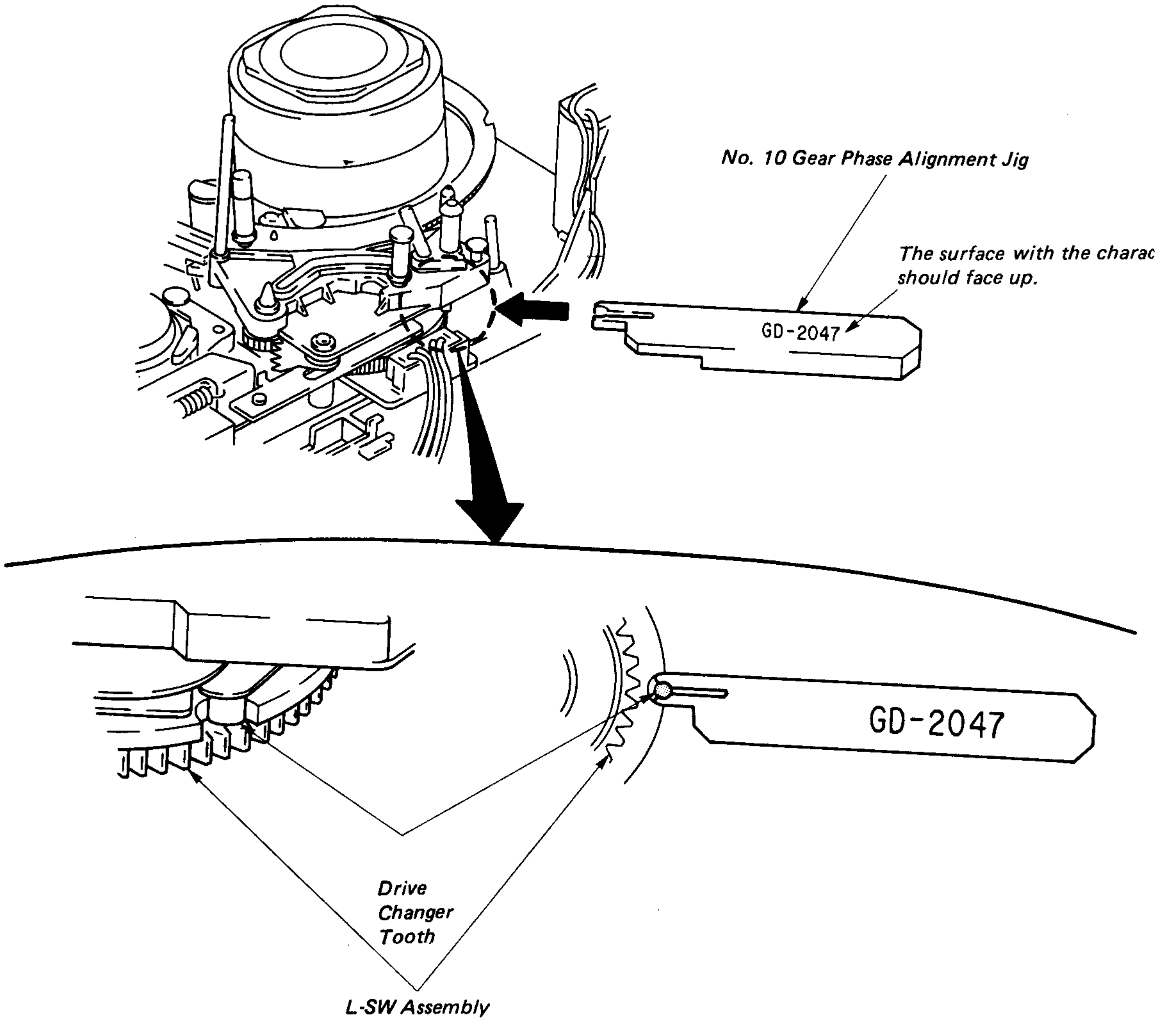

No. 10 Gear Phase Alignment Jig
The surface with the characters should face up.
GD-2047
GD-2047
Drive Changer Tooth
L-SW Assembly

Fig. 1-16

1-3-8. Pinch Roller Assembly

1. Removal

1) Remove the loading ring assembly as instructed in 1-3-7.
2) Remove the stop washer ❶ . (See Fig. 1-17.)
3) Change the hooking position of the spring ❸ on the No. 7 guide assembly ❷ . (See Fig. 1-18.)
4) Rotate the pinch roller assembly ❹ in the arrow Ⓐ direction. (See Fig. 1-19.)
5) Remove the pinch roller assembly ❹ toward the arrow Ⓑ . (See Fig. 1-20.)
6) Remove the spring ❸ . (See Fig. 1-21.)

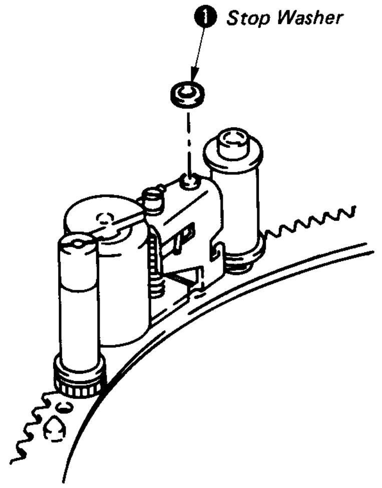

❶ Stop Washer

Fig. 1-17

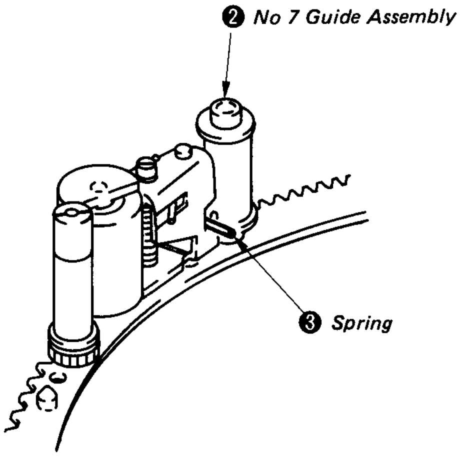

❷ No 7 Guide Assembly
❸ Spring

Fig. 1-18

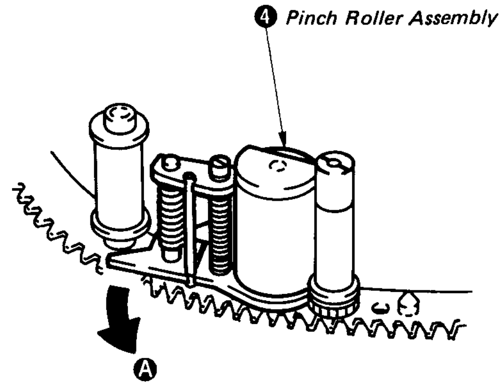

❹ Pinch Roller Assembly
Ⓐ

Fig. 1-19

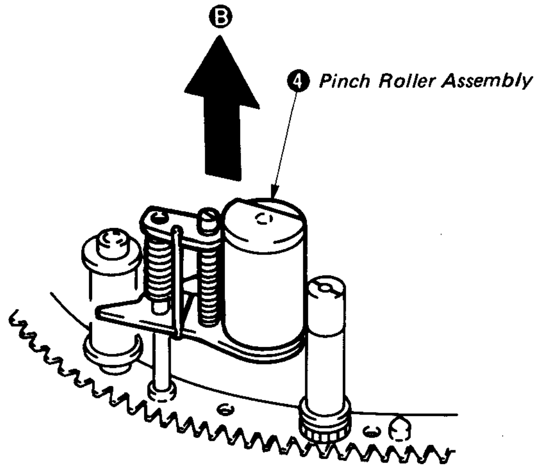

Ⓑ
❹ Pinch Roller Assembly

Fig. 1-20

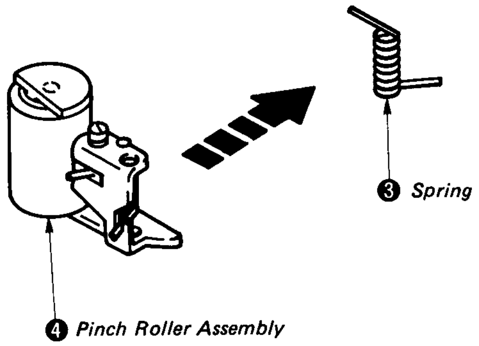

❸ Spring
❹ Pinch Roller Assembly

Fig. 1-21

2. Remounting

1) Rehook the spring ❸ . (See Fig. 1-22.)
2) Reinsert a thin object like a clip ❺ into the pinch roller assembly hole ❻ . (See Fig. 1-23 and 24.)
3) Recontact the loading ring assembly spindle ❼ with the tip of the clip ❺ and fit the pinch roller assembly ❹ . (See Fig. 1-25 and 26.)
4) Rehook the spring on the No. 7 guide assembly ❷ . Confirm that the spring is hooked to part Ⓐ at this time. (See Fig. 1-27.)
5) Remount the stop washer ❶ . (See Fig. 1-28.)
6) Remount the loading ring assembly as instructed in 1-3-7.

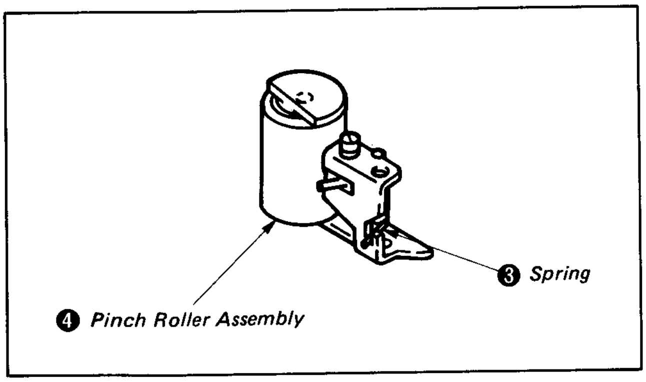

❸ Spring
❹ Pinch Roller Assembly

Fig. 1-22

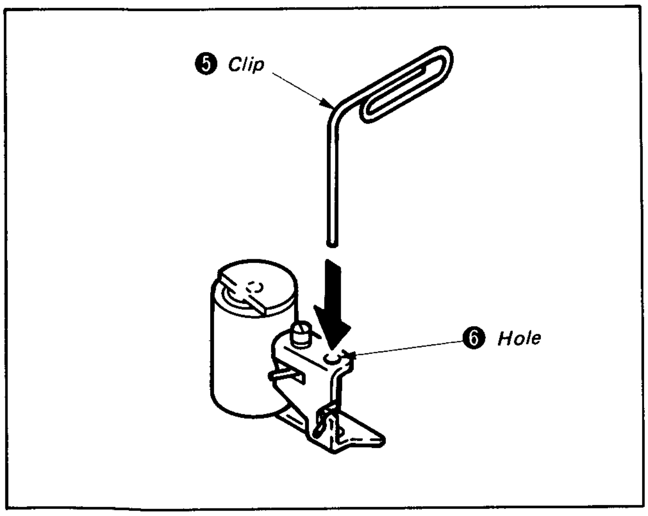

❺ Clip
❻ Hole

Fig. 1-23

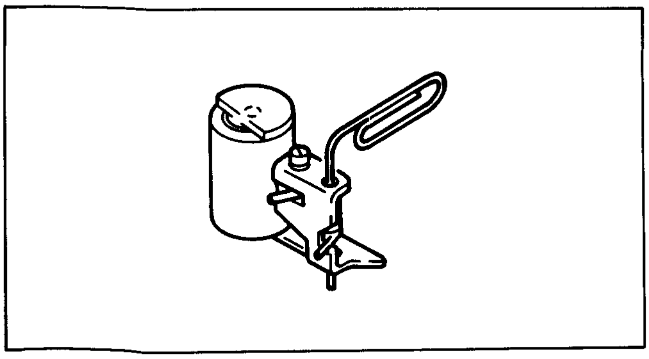


Fig. 1-24

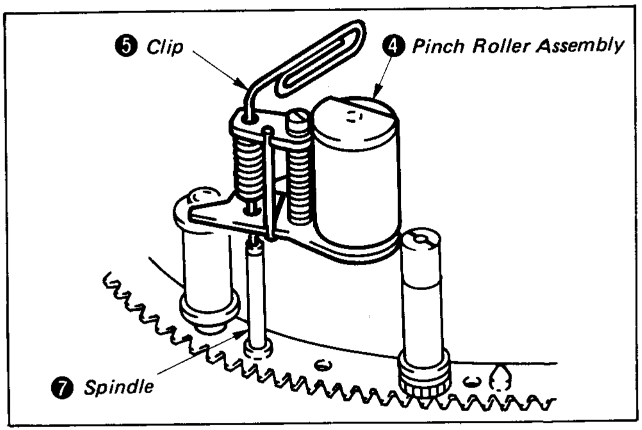

❺ Clip
❹ Pinch Roller Assembly
❼ Spindle

Fig. 1-25

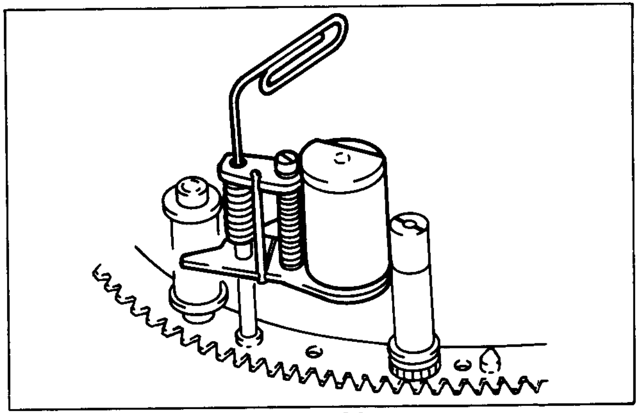


Fig. 1-26

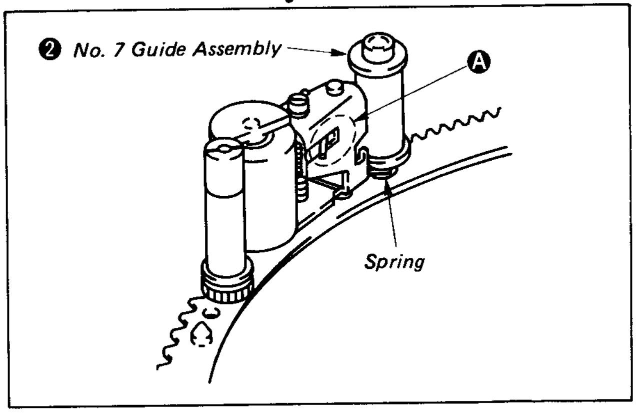

❷ No. 7 Guide Assembly
Ⓐ
Spring

Fig. 1-27

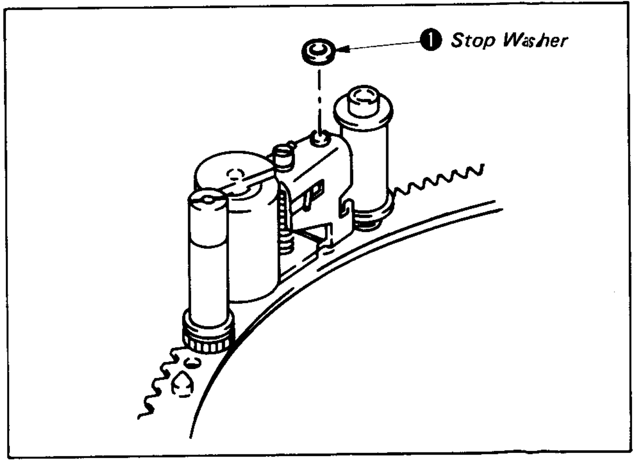

❶ Stop Washer

Fig. 1-28

1-3-9. Slant Guide Chassis Assembly

1. Removal

1) Set up the EJECT mode and raise the cassette compartment asembly.
2) Remove the loading ring assembly as instructed in 1-3-7.
3) Remove the screw ❶ and E ring ❷ .
4) Remove the slant guide chassis assembly ❸ . (See Fig. 1-29.)

2. Remounting

1) Operate the mode selector and align the righthand edge of the L slider and that of the lock slider. (See Fig. 1-30.)
2) Set the guide base assembly of the slant guide chassis assembly in an unthreading condition (with the guide base assembly moved to the control panel side) and remount it. (See Fig. 1-31.)
   Check the meshing position of the slant guide drive gear and the L slider assembly gear at this time.
3) Refit the E ring ❷ and tighten the screw ❶ . (See Fig. 1-29.)
4) Set to Condition 1) of 1. Remounting in 1-3-7.
5) Remount the loading ring assembly as instructed in 1-3-7.
6) Lower the cassette compartment assembly.

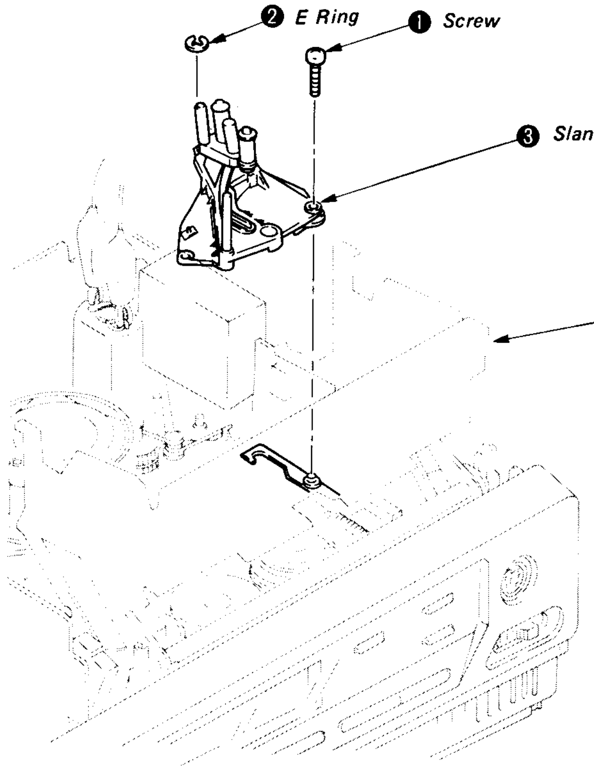

❷ E Ring
❶ Screw
❸ Slant Guide Chassis Assembly
Cassette Compartment Assembly

Fig. 1-29

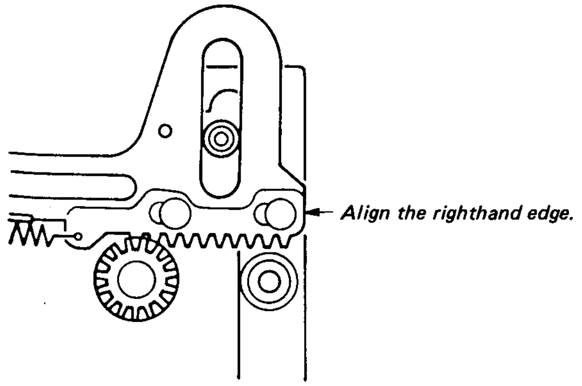

Align the righthand edge.

Fig. 1-30

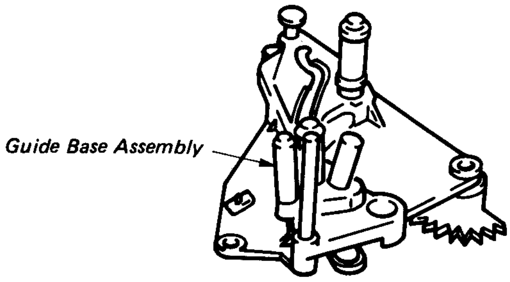

Guide Base Assembly

Fig. 1-31

1-3-10. No. 2 Guide Assembly

1. Removal

1) Remove the tape stopper ❶ .
2) Rotate the rotary upper drum counterclockwise so that the head does not contact.
3) Remove the drum guard screw ❷ .
4) Remove the screw ❸ .
5) Remove the guide nut ❹ of the No. 3 guide, as well as the guide flange ❺ , guide ❻ and compression spring ❼ .
6) Remove the No. 2 guide assembly ❽ . (See Fig. 1-32.)

2. Remounting

1) Mesh the toothless part Ⓐ of the toothed wheel under the No. 2 guide assembly (entrance guide (P) assembly) and that Ⓑ of the L slider.
2) Remount the compression spring ❼ , guide ❻ , and guide flange ❺ in this order and tighten the guide nut ❹ temporarily.
3) Tighten the screw ❸ .
4) Tighten the drum guard screw ❷ .
5) Refit the tape stopper ❶ . (See Fig. 1-32.)

Note: Be sure to adjust the tape path as instructed in 1-4 after remounting.

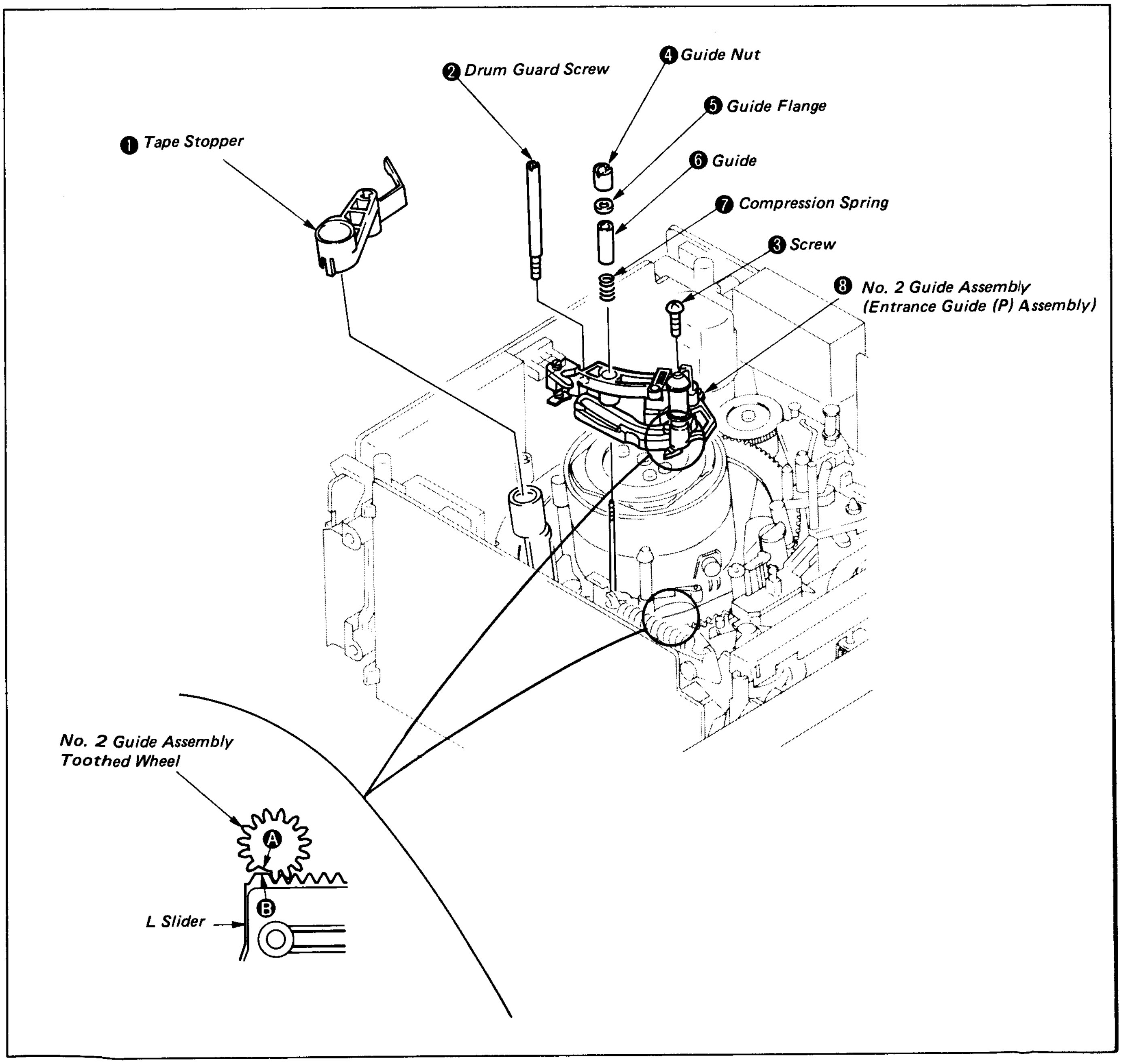

❷ Drum Guard Screw
❹ Guide Nut
❺ Guide Flange
❶ Tape Stopper
❻ Guide
❼ Compression Spring
❸ Screw
❽ No. 2 Guide Assembly (Entrance Guide (P) Assembly)
No. 2 Guide Assembly Toothed Wheel
Ⓐ
Ⓑ
L Slider

Fig. 1-32

1-3-11. L Slider Assembly

1. Removal

1) Remove the slant guide chassis assembly as instructed in 1-3-9.
2) Remove the No. 2 guide assembly (entrance guide (P) assembly) as instructed in 1-3-10.
3) Set up the DRUM START mode.
4) Remove the slant guide drive gear ❶ .
5) Remove the pin of the tension regulator load arm assembly ❷ from the cam groove of the tension regulator arm assembly. (Refer to 1-3-4 Tension regulator arm assembly.)
6) Remove the two stopper washers ❸ .
7) Remove the L slider assembly ❺ push the RL arm assembly lug ❹ toward the arrow Ⓐ .
8) Remove the stopper washer ❻ and tension regulator load arm assembly ❷ . (See Fig. 1-33.)

2. Remounting

1) Grease the parts. (See Fig. 1-34.)
2) Remount the tension regulator load arm assembly ❷ and stop washer ❻ . (See Fig. 1-33.)
3) Remount the L slider assembly ❺ pushing the RL arm assembly lug ❹ toward the arrow Ⓐ .
4) Refit the two stop washers ❸ .
5) Reinsert the pin of the tension regulator load arm assembly ❷ into the groove of the M slider. (Refer to 1-3-15 M Slider.)
6) Reinsert the pin of the tension regulator load arm assembly ❷ in the cam groove of the tension regulator arm assembly referring to 2) of 2. Remounting in 1-3-4 (Refer to 1-3-4 Tension regulator arm assembly.)
7) Operate the mode selector and align the righthand edges of the L slider and lock slider. (Refer to 1) of 2. Remounting in 1-3-9.)
8) Mesh the notch of the slant guide drive gear with the tooth at the lefthand edge of the L slider assembly by sliding one tooth. (See Fig. 1-35.)
9) Remount the No. 2 guide assembly in accordance with 1-3-10.
10) Remount the slant guide chassis assembly as instructed in 1-3-9.

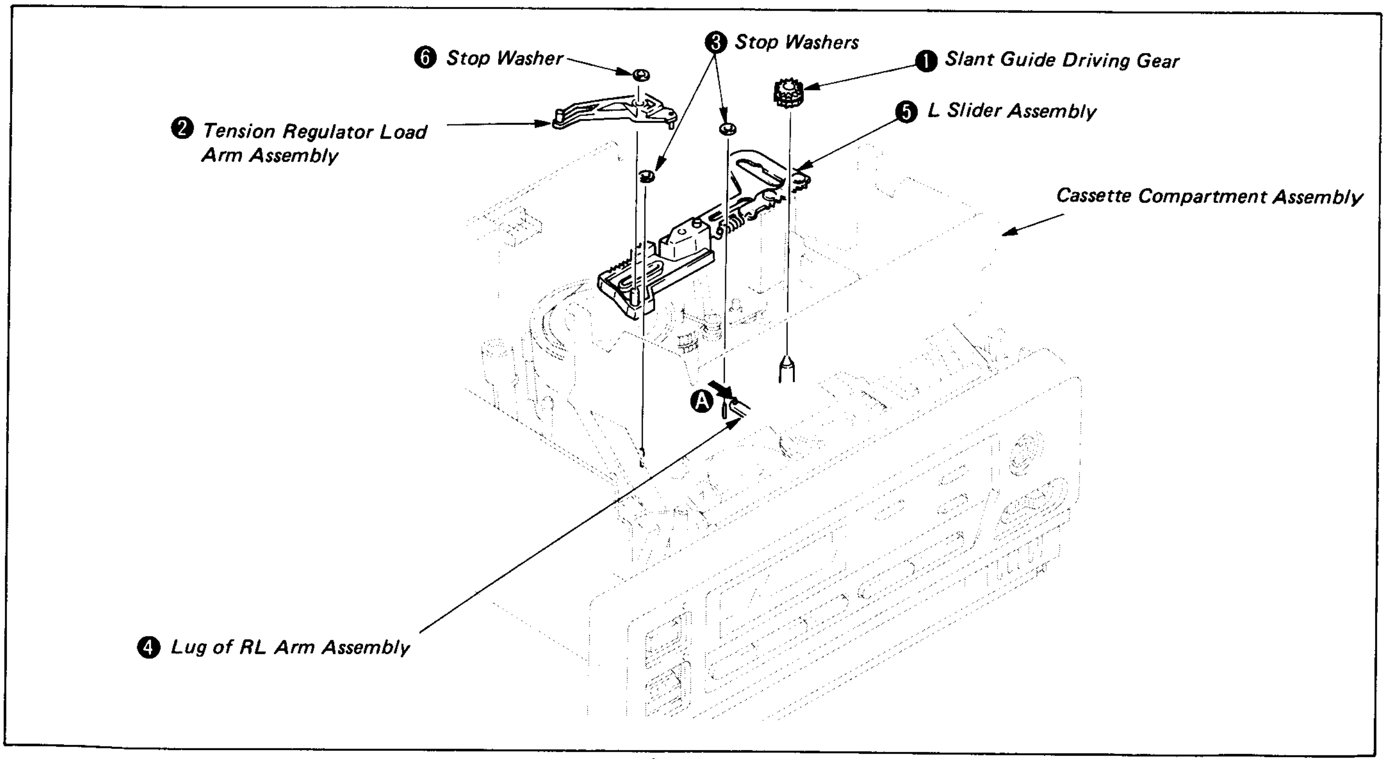

❻ Stop Washer
❸ Stop Washers
❶ Slant Guide Driving Gear
❷ Tension Regulator Load Arm Assembly
❺ L Slider Assembly
Cassette Compartment Assembly
Ⓐ
❹ Lug of RL Arm Assembly

Fig. 1-33

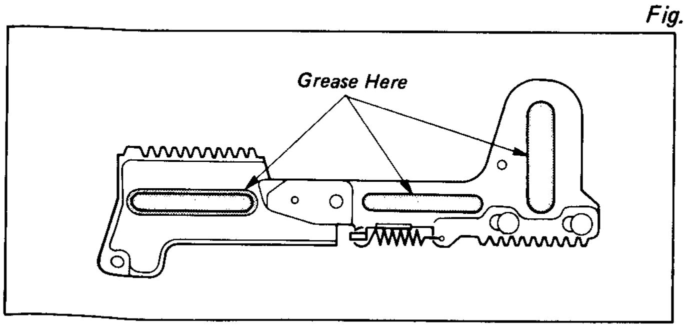

Grease Here

Fig. 1-34

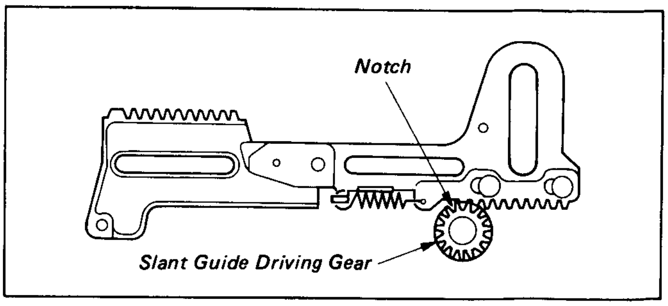

Notch
Slant Guide Driving Gear

Fig. 1-35

1-3-12. L-SW Assembly

1. Removal

1) Remove the L slider assembly as instructed in 1-3-11.
2) Remove the lock slider retainer ❶ .
3) Remove the screw ❷ and lock slider ❸ .
4) Remove the stop washer ❹ and spring ❺ .
5) Remove the drive changer assembly ❻ .
6) Remove the connector ❼ .
7) Remove two screws ❽ and L-SW assembly ❾ . (See Fig. 1-36.)

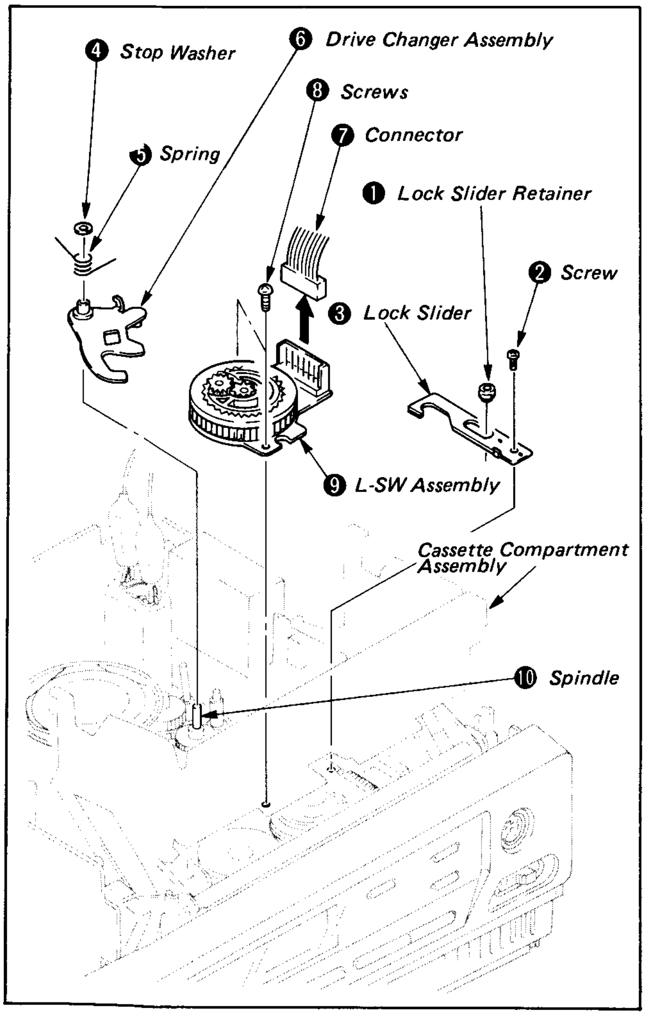

❹ Stop Washer
❻ Drive Changer Assembly
❽ Screws
❼ Connector
❺ Spring
❶ Lock Slider Retainer
❷ Screw
❸ Lock Slider
❾ L-SW Assembly
Cassette Compartment Assembly
❿ Spindle

Fig. 1-36

2. Remounting

1) Oil half a drop of oil on the spindle (planetary roller spindle) of the L-SW assembly ❾ .
2) Remount the L-SW assembly ❾ and tighten two screws ❽ .
3) Reconnect the connector ❼ .
4) Operate the mode selector and check that the L-SW assembly ❾ rotates.
5) Oil half a drop of oil on the spindle ❿ .
6) Grease the drive changer assembly ❻ . (See Fig. 1-37.)
7) Remount the drive changer assembly ❻ . (See Fig. 1-36.)
8) Rehook the spring ❺ and refit the stop washer ❹ .
9) Operate the mode selector and check that the L-SW assembly ❾ rotates.
10) Remount the lock slider ❸ and tighten the screw ❷ . Confirm that the positioning dowel is firmly in place.
11) Remount the lock slider holder ❶ . Note correct vertical direction. (See Fig. 1-36.)
12) Operate the mode selector and set in the position shown in Fig. 1-38. The DC roller should be in the groove.
13) Remount the L slider assembly as instructed in 1-3-11.

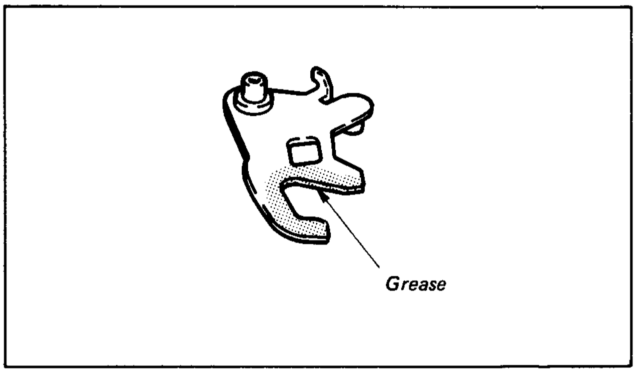


Fig. 1-37

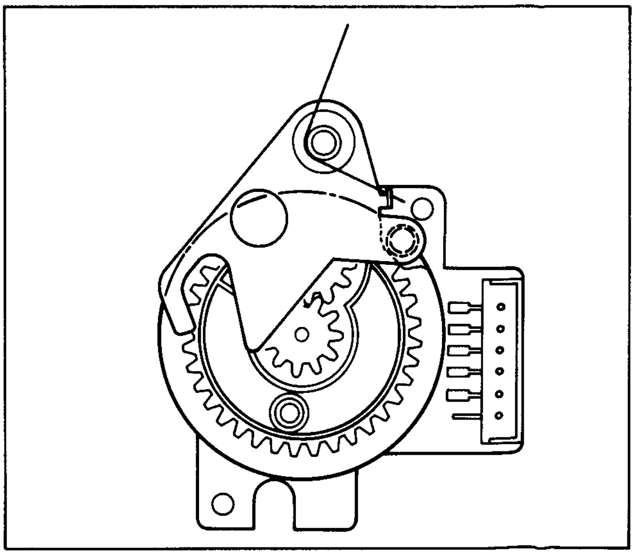


Fig. 1-38

1-3-13. Plunger Solenoid

1. Removal

1) Open the MC-8 Board and disconnect the connector CN501 (white) 3P as instructed in section 2 disassembly. (See page 17.)
2) Remove the cassette compartment assembly as instructed in 1-1-1.
3) Remove the spring ❶ .
4) Remove two stop washers ❷ .
5) Remove the screw ❸ and lock slider ❹ .
6) Remove two screws ❺ and the plunger solenoid ❻ . (Be careful not to inflict scars on the T reel table by a screwdriver. Do not touch the table.) (See Fig. 1-39.)

2. Remounting

1) Reinsert the pin ❼ of the plunger solenoid in the P arm hole ❽ and tighten two screws ❺ . Be careful not to inflict scars on the T reel table by a screwdriver or touch it.)
2) Remount the lock slider ❹ and tighten the screw ❸ .
3) Refit the two stop washers ❷ .
4) Refit the spring ❶ . (See Fig. 1-39.)
5) Remount the cassette compartment assembly in accordance with 1-1-1.
6) Reconnect the connector CN501 (white) 3P on the MC-8 Board.

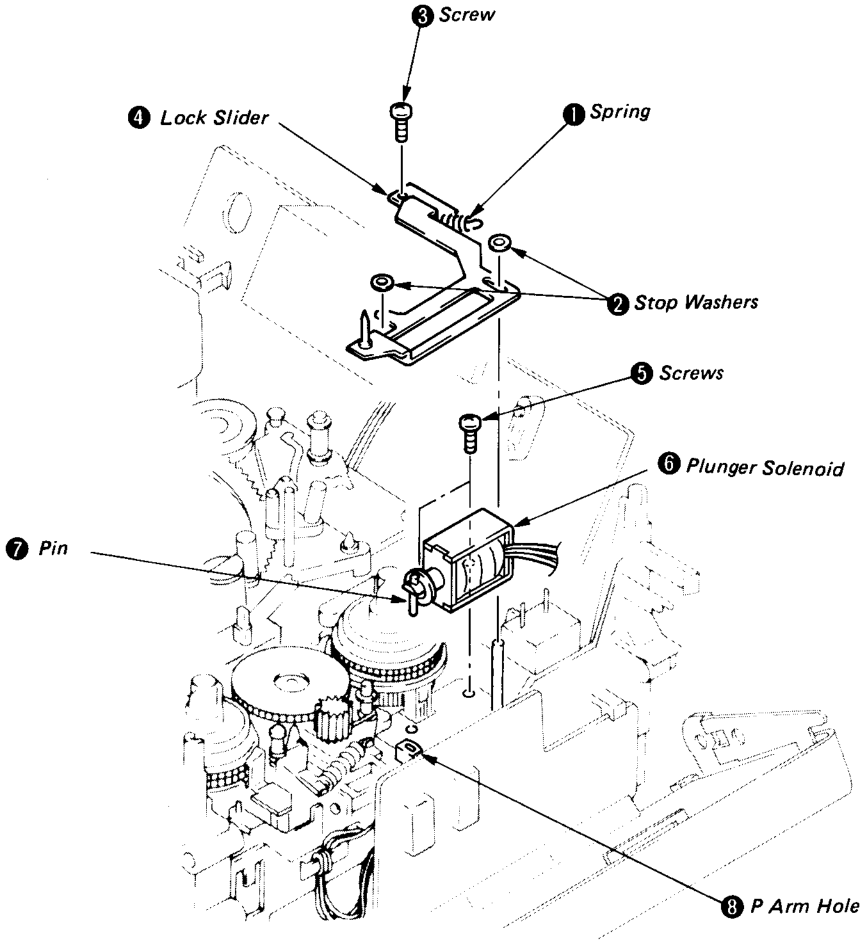


Fig. 1-39

1-3-14. M-SW Assembly

1. Removal

1) Open the MC-8 Board as instructed in section 2 disassembly (See page 17.), remove the connector CN515 (black) 2P from the RS-15 Board, and extend the wire stretching to the outside.
2) Remove the T reel table assembly as instructed in 1-3-2.
3) Remove the stop washer ① and drive gear (B) assembly ② .
4) Remove the complete LD-1 board ③ . (See Fig. 1-40.)
5) Remove the lock slider as instructed in 3), 4), and 5) of 1. Removal in 1-3-13.
6) Remove the spring ④ and B release arm assembly ⑤ .
7) Check that the EJECT mode is set up.
8) Remove the stop wahser ⑥ and mode output gear ⑦ .
9) Remove the screw ⑧ and RECOG SW assembly (S902) ⑨ .
10) Disconnect the connector ⑩ .
11) Remove three screws ⑪ , control motor cover ⑫ and M-SW assembly ⑬ .
12) Remove solder Ⓐ and the control motor (M903) ⑭ . (See Fig. 1-41.)

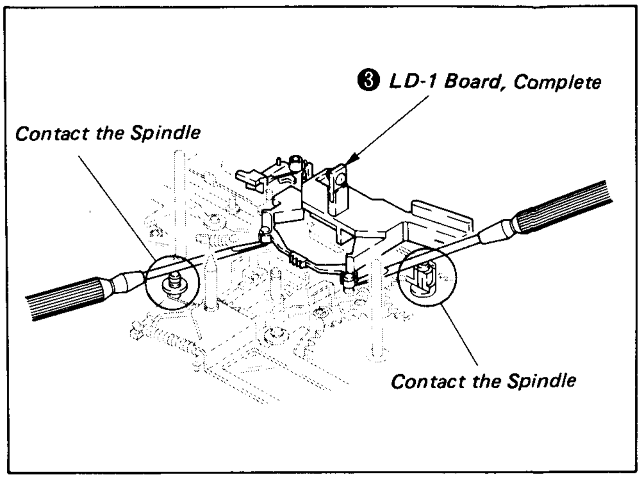

③ LD-1 Board, Complete
Contact the Spindle
Contact the Spindle

Fig. 1-40

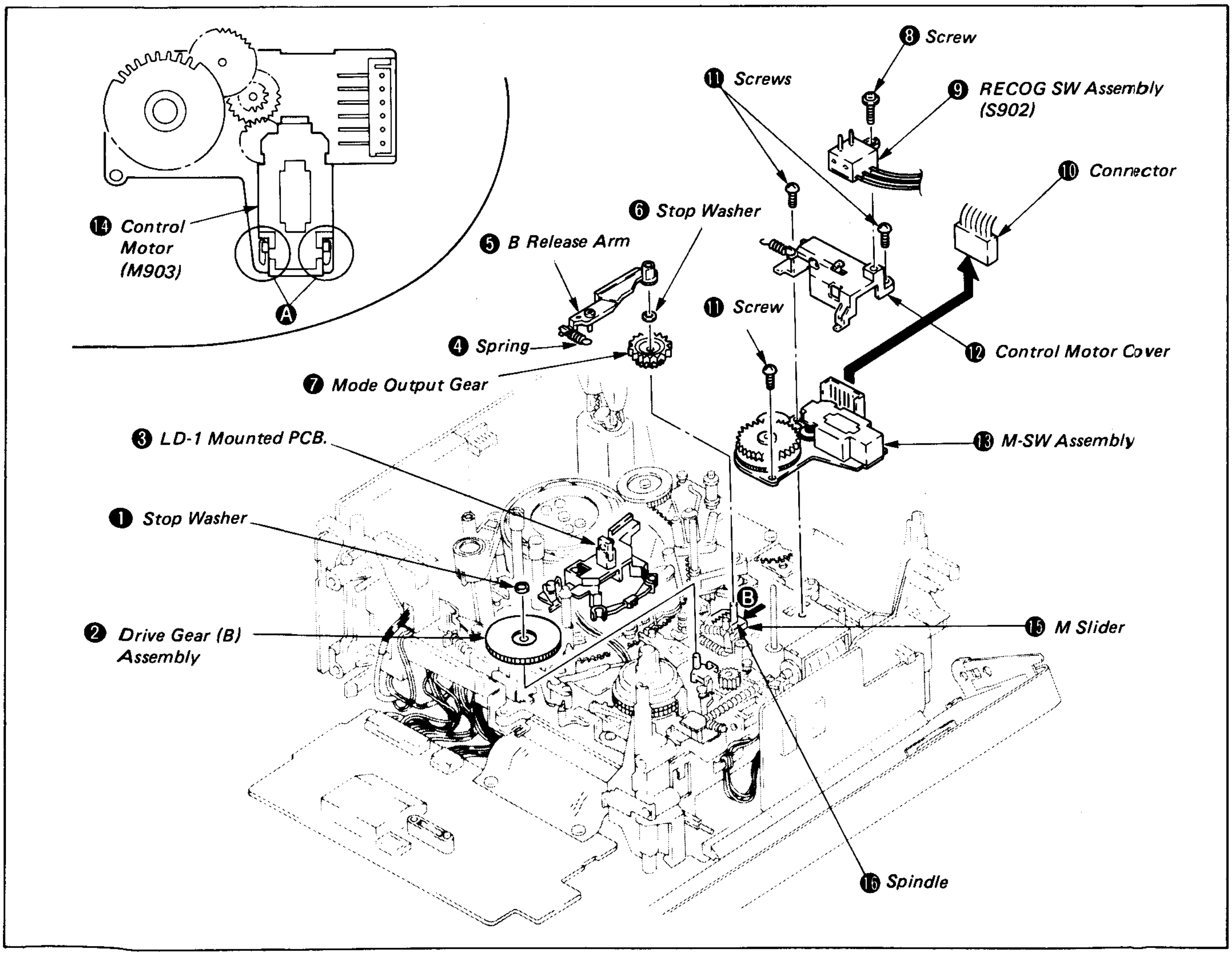

⑭ Control Motor (M903)
Ⓐ
⑧ Screw
⑪ Screws
⑨ RECOG SW Assembly (S902)
⑩ Connector
⑥ Stop Washer
⑤ B Release Arm
⑪ Screw
④ Spring
⑫ Control Motor Cover
⑦ Mode Output Gear
③ LD-1 Mounted PCB.
⑬ M-SW Assembly
① Stop Washer
Ⓑ
② Drive Gear (B) Assembly
⑮ M Slider
⑯ Spindle

Fig. 1-41

2. Remounting

1) Resolder the control motor (M903) ⑭ .
2) Remount the M-SW assembly ⑬ and control motor cover ⑫ and tighten three screws ⑪ .
3) Reconnect the connector ⑩ .
4) Remount RECOG SW assembly (S902) ⑨ and tighten the screw ⑧ .
5) Check that the EJECT mode is set up.
6) Check that the M slider ⑮ is moved toward the arrow Ⓑ fully.
7) Oil half a drop of oil on the spindle ⑯ . (See Fig. 1-41.)
8) Remount the mode output gear ⑦ so that the alignment holes are linear. (See Fig. 1-42.)
   Caution required here since there are two holes in the M-SW assembly gear.
9) Refit the stop washer ⑥.
10) Set to the LOADING/UNLOADING mode.
11) Remount the B release arm assembly ⑤ and rehook the spring ④.
12) Remount the lock slider as instructed in 2), 3) and 4) of 2. Remounting in 1-3-13.
13) Remount the complete LD-1 board ③ .
14) Remount the drive gear (B) assembly ② and refit the stop washer ① . (See Fig. 1-41.)
15) Remount the T reel table assembly as instructed in 1-3-2.
16) Connect the connector CN515 (black) 2P to the RS-15 Board.

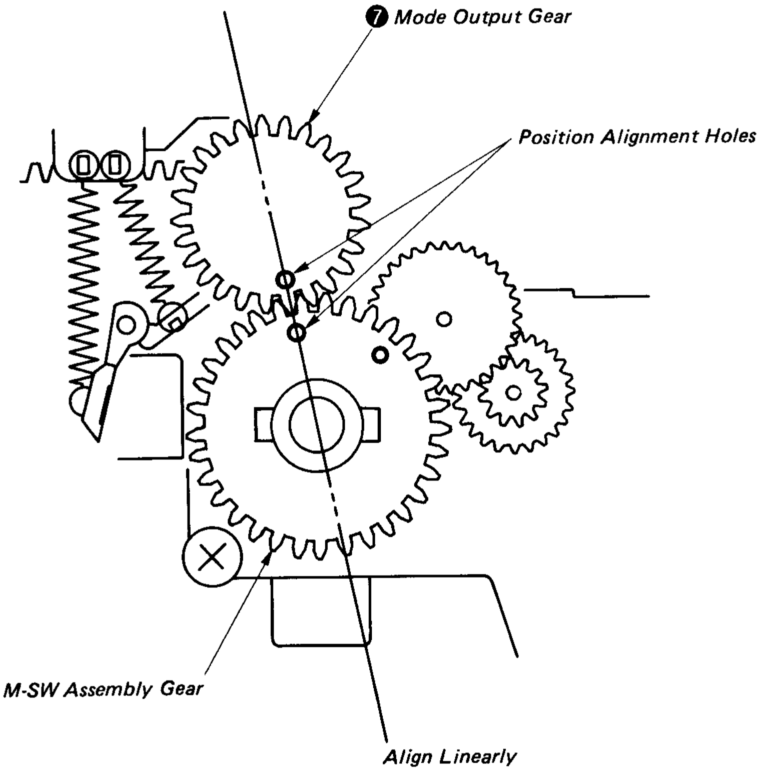


Fig. 1-42

1-3-15. M Slider

1. Removal

1) Open the MC-8 Board as instructed in section 2 disassembly (See page 17.) and remove the timing belt ❶.
2) Remove the pinch press arm assembly as instructed in 1-3-3.
3) Remove the tension regulator arm assembly as instructed in 1-3-4.
4) Remove the tension regulator band assembly as instructed in 1-3-5.
5) Remove the loading ring assembly as instructed in 1-3-7.
6) Perform Steps 1) to 6) of 1-3-14.
7) Remove the tension regulator load arm assembly as instructed in 8) of 1. Removal in 1-3-11.
8) Remove the spring ❷.
9) Remove two stop washers ❸, S main brake assembly ❹ and T main brake assembly ❺.
10) Set up the LOADING TOP and LOADING/UNLOADING modes.
11) Remove two screws ❻ and the driving arm complete assembly ❼.
12) Perform Steps 7) and 8) of 1. Removal in 1-3-14.
13) Remove two springs ❽.
14) Remove the REW brake assembly ❾.
15) Remove the stop washer ❿ and B release slider ⓫.
16) Remove the RVS arm ⓬.
17) Remove the stop washer ⓭, spring ⓮, and RL arm ⓯.
18) Move the M slider ⓰ toward the right (leave approximately 5mm on the left).
19) Remove the E ring ⓱ and pinch press lever assembly ⓲.
20) Remove the spring ⓳ and hard brake (S) ⓴.
21) Remove the stop washer ㉑, push the mode arm ㉒ toward the arrow Ⓐ, then remove the M slider ⓰ by lifting the lefthand side of the M slider ⓰. (See Fig. 1-43.)

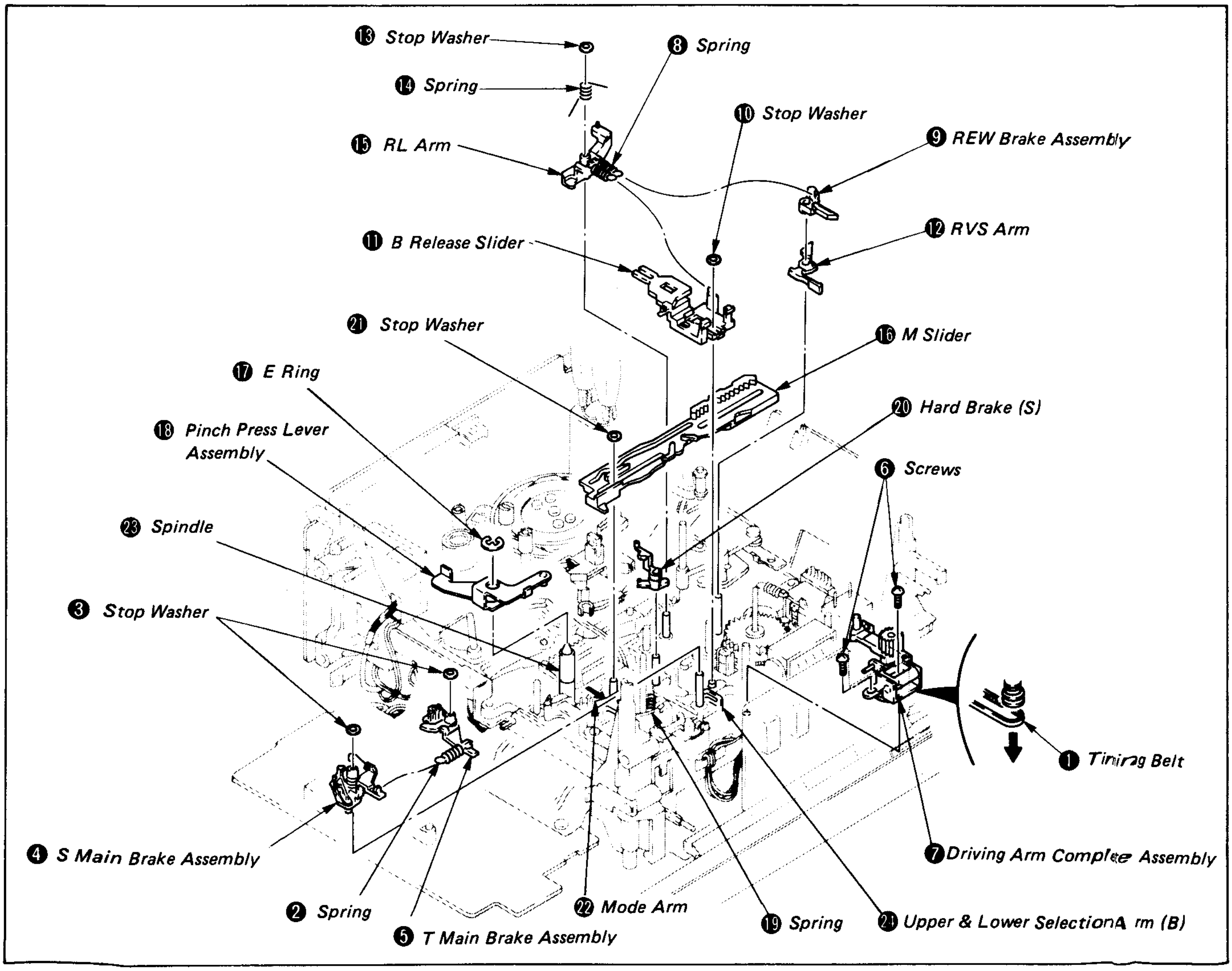

⓭ Stop Washer
❽ Spring
⓮ Spring
❿ Stop Washer
⓯ RL Arm
❾ REW Brake Assembly
⓫ B Release Slider
⓬ RVS Arm
㉑ Stop Washer
⓰ M Slider
⓱ E Ring
⓴ Hard Brake (S)
⓲ Pinch Press Lever Assembly
❻ Screws
㉓ Spindle
❸ Stop Washer
❶ Timing Belt
❹ S Main Brake Assembly
❼ Driving Arm Complete Assembly
❷ Spring
㉒ Mode Arm
⓳ Spring
㉑ Upper & Lower Selection Arm (B)
❺ T Main Brake Assembly

Fig. 1-43

2. Remounting

1) Grease the slider. (See Fig. 1-44.)
2) Push the mode arm ㉒ in the arrow Ⓐ direction, remount the M slider ⑯ referring to Fig. 1-45 and paying attention to the vertical position relationship with other portions of the slider, and refit the stop washer ㉑ . (See Fig. 1-43.)
3) Remount the hard brake (S) ⑳ and rehook the spring ⑲ .
4) Grease as shown in Fig. 1-46.
5) Oil half a drop of oil on the parts below the spindle ㉓ groove, mount the pinch press lever assembly ⑱ , and refit the E ring ⑰ .
6) Remount the RL arm ⑮ , rehook the spring ⑭ , and refit the stop washer ⑬ .
7) Remount the RVS arm ⑫ .
8) Remount the B release slider ⑪ and refit the stop washer ⑩ .
9) Remount the REW brake assembly ❾ .
10) Rehook two springs ❽ .

Note: Rehook two springs as noted below so as not to misplace them.
The spring for the B release slider
outside diam: 2mm, wire diam: 0.18mm
The spring for the REW ass'y
outside diam: 1.6mm, wire diam: 0.12mm

11) Move the M slider ⑯ fully to the left.
12) Perform Steps 7), 8) and 9) of 2. Remounting in 1-3-14.
13) Set up the LOADING/UNLOADING mode.
14) Insert the horizontal spindle of the driving arm complete assembly ❼ in the groove of the upper & lower selection arm (B) ㉔ , insert the lug of the RVS arm ⑫ in the dented part of the driving arm complete assembly ❼ , and tighten two screws ❻ .
15) Remount the T main brake assembly ❺ and S main brake assembly ❹ , refit two each stop washers ❸ , and refit the spring ❷ . (See Fig. 1-43.)
16) Remount the tension regulator load arm assembly as instructed in 2) of 2. Remounting in 1-3-11.
17) Perform Steps 11) to 16) of 2. Remounting in 1-3-14.
18) Remount the loading ring assembly as instructed in 1-3-7.
19) Remount the tension regulator band assembly as instructed in 1-3-5.
20) Remount the tension regulator arm assembly as instructed in 1-3-4.
21) Remount the pinch press arm assembly as instructed in 1-3-3.
22) Open the MC-8 Board referring to section 2 disassembly (See page 17.) and remount the timing belt ❶ .

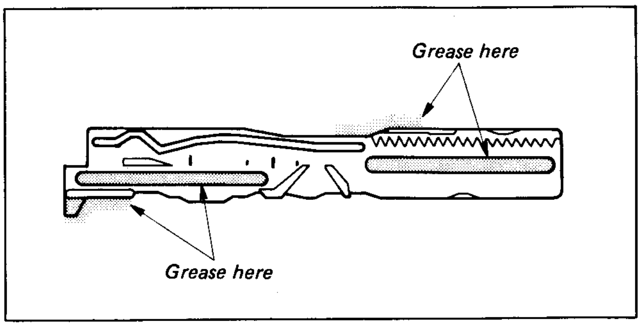


Fig. 1-44

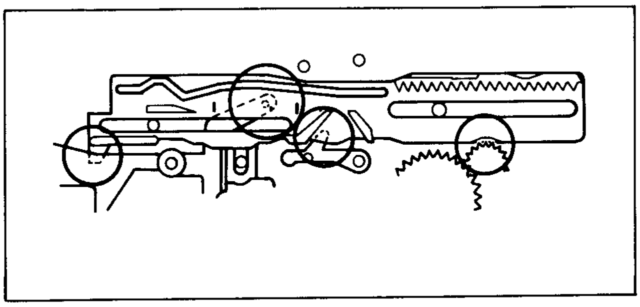


Fig. 1-45

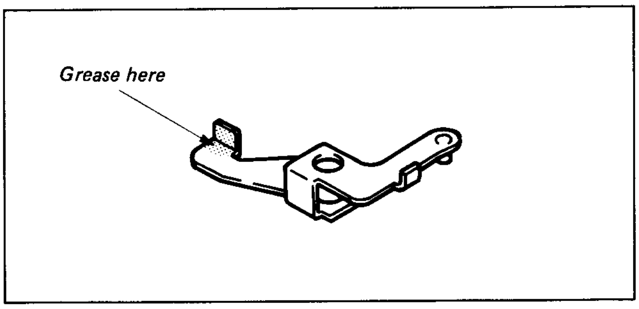


Fig. 1-46

1-3-16. Capstan Motor

1. Removal

1) Remove the tape stopper as instructed in 1) of 1. Removal in 1-3-10.
2) Remove the loading ring assembly as instructed in 1-3-7.
3) Open the MC-8 Board as instructed in section 2 disassembly (See page 17.) and turn the set upside down.
4) Remove the screw ❶ and the wire holder ❷ .
5) Remove the timing belt ❸ .

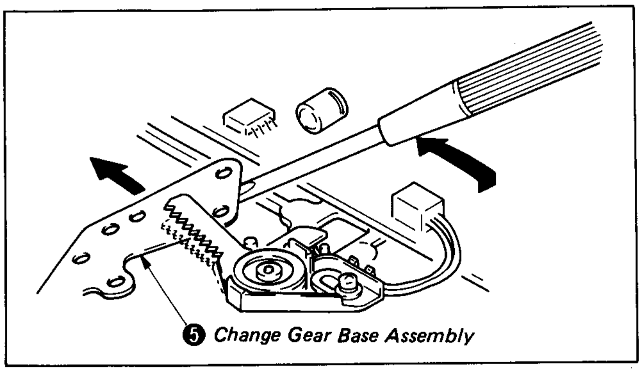

❺ Change Gear Base Assembly

Fig. 1-47

6) Remove the screw ❹ and the change gear base assembly ❺ using a screwdriver. (See Fig. 1-47 and 48.)
7) Disconnect the connectors ❻ and ❼ .
8) Remove two screws ❽ and capstan motor (M902) ❾ as shown by the arrow Ⓐ . (See Fig. 1-48.)

2. Remounting

1) Remount the capstan motor (M902) ❾ and tighten two screws ❽ .
2) Reconnect the connectors ❻ and ❼ .
3) Remount the change gear base assembly ❺ and tighten the screw ❹ .
4) Re-place the timing belt ❸ .
5) Remount the wire holder ❷ and tighten the screw ❶ . (See Fig. 1-48.)
6) Re-place the set in its forward position.
7) Remount the loading ring assembly as instructed in 1-3-7.
8) Remount the tape stopper as instructed in 5) of 1-3-10.

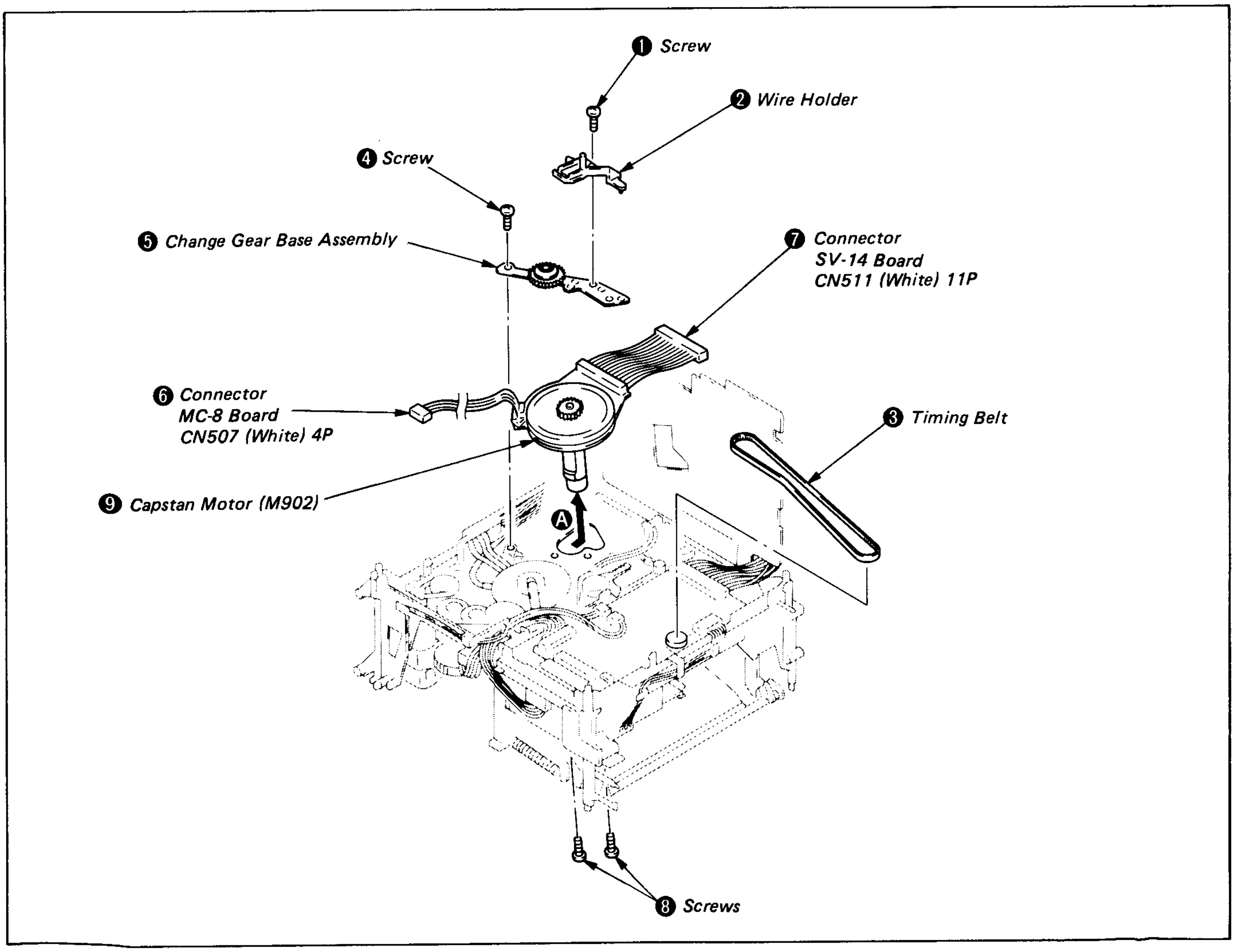

❶ Screw
❷ Wire Holder
❹ Screw
❺ Change Gear Base Assembly
❼ Connector
SV-14 Board
CN511 (White) 11P
❻ Connector
MC-8 Board
CN507 (White) 4P
❸ Timing Belt
❾ Capstan Motor (M902)
Ⓐ
❽ Screws

Fig. 1-48

1-3-17. State of Wear of Video Heads Check

As the accuracy of the check depends on the state of the heads and precision of the checker, the results should be taken only as an indication of the state of wear.

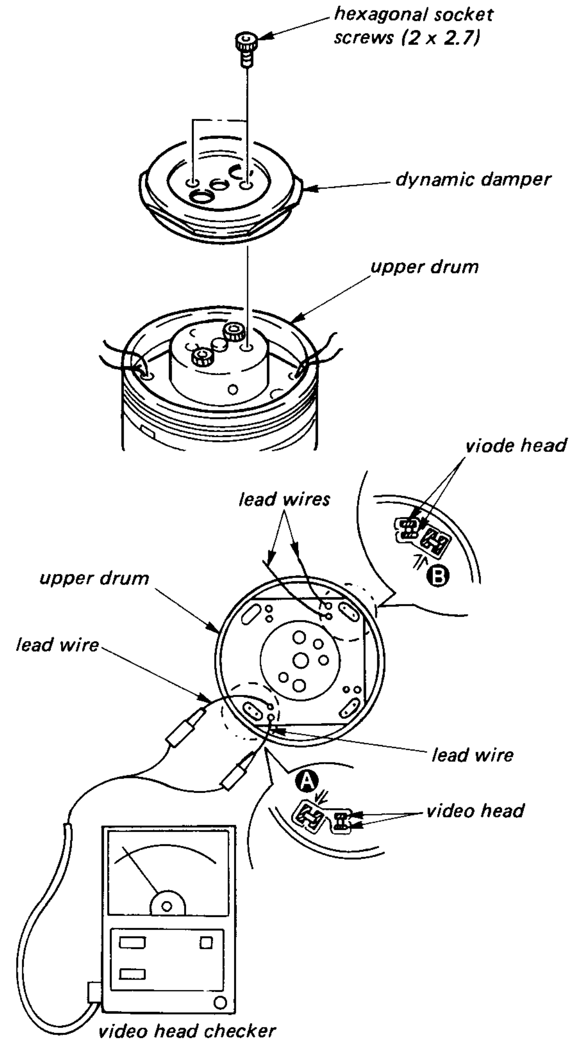
[Adjustment of video head checker]

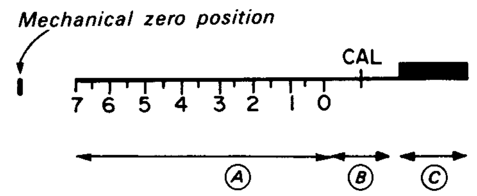
1) Mechanical zero
   Verify that the pointer of the video head checker is at the mechanical zero position. If it is not at this position, adjust the mechanical zero control.
2) Battery voltage check
   Set the MODE switch to "BATT" and set the POWER switch to "ON". The deflection of the pointer should be within the range marked "BATT". If not, replace the battery (use a 6F22 battery) as follows.
3) Calibration check
   Set the POWER switch to "ON" and the MODE switch to "CAL", then adjust the CAL control so that the pointer is on the CAL mark.
   Note 1: Be sure to carry out this adjustment whenever the RANGE switch is changed.
   Note 2: Be sure to check CAL before measuring the head and proceed the measurement after adjusting CAL, if CAL is not properly set.

[Method of measurement]

1) Remove the two hexagonal socket screws (2 x 2.7) and dismount the dynamic damper.
2) Unsolder the portions indicated by the arrow Ⓐ and Ⓑ.
3) Solder the lead wires on the 2 video head.
4) Attach the measuring clips to the head leads.
   Be sure to separate the leads by at least 1.5cm.
5) Set RANGE switch to "A" and MODE switch to "MEAS". The pointer will deflect to indicate the state of wear of the heads.

Note: The deflection for the 2 video heads may be different so be sure to measure both.


hexagonal socket screws (2 x 2.7)
dynamic damper
upper drum
viode head
lead wires
upper drum
lead wire
B
lead wire
A
video head
video head checker


Mechanical zero position
CAL
7 6 5 4 3 2 1 0
Ⓐ
Ⓑ
Ⓒ

Note:
Heads (rotary upper drum) don't need replacing when the picture is normal on RECORD and PLAYBACK modes, even if the measured value is in the deflection Ⓑ.

MEASURED VALUE

1-3-18. Rotary Upper Drum Replacement

1. Removal

- The rotary upper drum is marked with a colour dot as shown in Fig. 1-49.
- Remove the rotary upper drum after recording in advance if recording is possible.

The colour combination of rotary upper drum for replacement

New Part		Former Part
Part No.	Colour Dot	Colour Dot
A-7049-005-A	Blue or Red	Blue or Red
A-7049-012-A	Black or Green	Black or Green

1) Remove two hexagon socket screws (2 x 2.7) ❶ and dismount the dynamic damper ❷ . (See Fig. 1-49.)
2) Suction solder at all of the soldered eight positions Ⓐ . Check that the printed wiring board and pins jutting out from below freely moove using tweezers, or other tool. (See Fig. 1-49.)
3) Remove the two hexagon socket screw (2 x 5) ❸ . (See Fig. 1-49.)
4) Remount the dismounting Jig Ⓑ by the accessory screws ❹ utilizing the screw holes in which the dynamic damper was mounted.
   Drive the hexagon socket screw ❺ into the jig and pulled up the rotary upper drum ❻ . (See Fig. 1-50.)

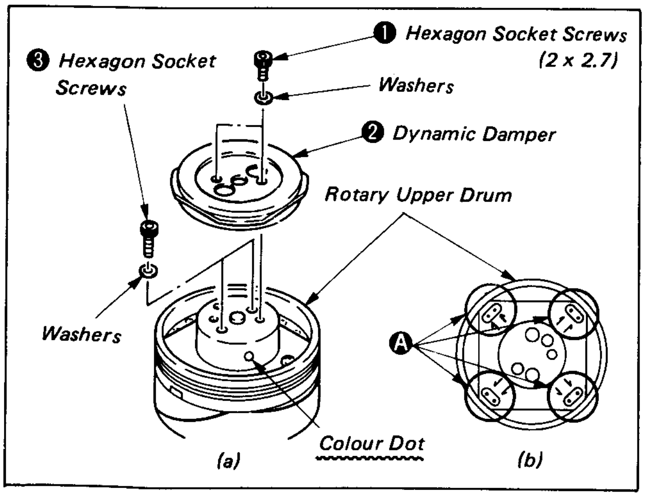

❸ Hexagon Socket Screws
❶ Hexagon Socket Screws (2 x 2.7)
Washers
❷ Dynamic Damper
Rotary Upper Drum
Washers
Ⓐ
Colour Dot
(a)
(b)

Fig. 1-49

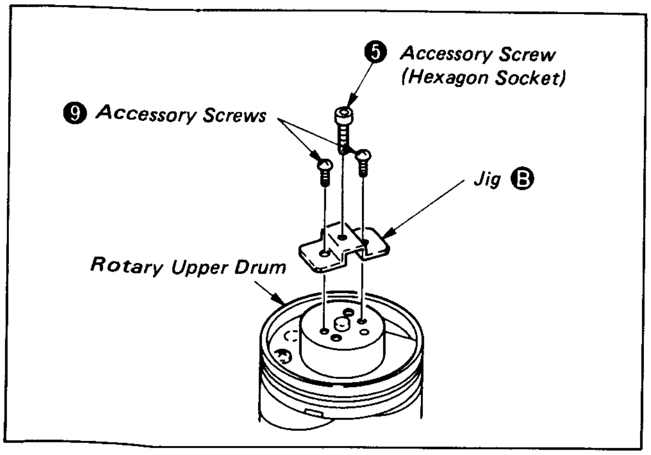

❺ Accessory Screw (Hexagon Socket)
❾ Accessory Screws
Jig Ⓑ
Rotary Upper Drum

Fig. 1-50

2. Remounting

1) Carefully clean the flange surfaces and planes of the rotary upper drum and visually check that no blemishes or flaws are left.
2) Insert Jig Ⓒ in the positioning hole Ⓓ so that the holes of the rotary upper drum ❻ and flange coincide. Lightly insert the rotary upper drum in the drum shaft while aligning their positions. (See Fig. 2-51.) (Check that pins are projecting above the holes on the printed circuit board of the rotary upper drum. When the pins are caught, correct using tweezers, etc.)
3) Remove Jig Ⓒ , lightly push the rotary upper drum by hands. If the rotary upper drum does not go in to the bottom, alternately tighten the two hexagon socket screws (2 x 5) ❸ by hand and temporarily fix them. (See Fig. 1-49 and 1-52.)
4) Reinsert the Jig Ⓒ in the positioning hole and check that the jig can be inserted smoothly. (When the jig cannot be inserted, loosen the two hexagon socket screws (2 x 5) ❸ and slide it inserting a clock screw-driver in the hole.)
5) Tighten the two hexagon socket screws (2 x 5) ❸ .

Note: Do not tighten too strongly.

6) Solder the eight positions Ⓐ . (See Fig. 1-49.)

Note: Be careful not to flow solder below the printed wiring board.

7) Tighten the two hexagon socket screws (2 x 2.7) ❶ reversing the screw removal procedure and remount the dynamic damper ❷ . (See Fig. 1-49.)

Note: Do not tighten too strongly.
When remounting, do not mix the hexagon socket screws (2 x 2.7) ❶ and hexagon socket screws (2 x 5) ❸ .

Note: Be sure to adjust the tape path as instructed in 1-4 after remounting.

Note: Replay the recorded tape after adjusting the tape path and before exchanging the rotary upper drum and check that the tape replays properly.

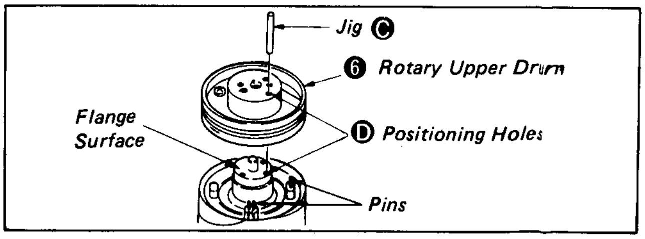

Jig Ⓒ
❻ Rotary Upper Drum
Flange Surface
Ⓓ Positioning Holes
Pins

Fig. 1-51

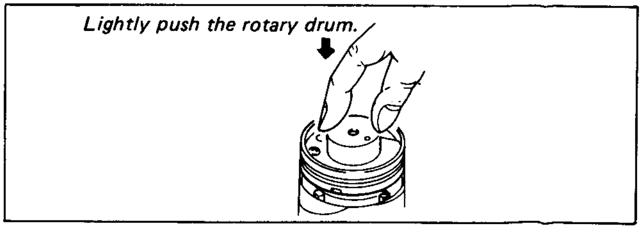

Lightly push the rotary drum.

Fig. 1-52

1-3-19. Drum Assembly Replacement

1. Removal

1) Open the MC-8 Board as instructed in section 2 disassembly. (See page 17.)
2) Remove the screw ❶ and head lead shield plate ❷ .
3) Remove the screw ❸ and shaft ground terminal ❹ . (See Fig. 1-53.)
4) Disconnect six connectors ❺ .
5) Remove two screws ❻ .
6) Remove the drum assembly ❼ . (See Fig. 1-54.)

2. Remounting

1) Remount the drum assembly ❼ and tighten two screws ❻ .
2) Connect six connectors ❺ . (See Fig. 1-54.)
3) Remount the shaft ground terminal ❹ and tighten the screw ❸ .
4) Remount the head lead shield plate ❷ and tighten the screw ❶ . (See Fig. 1-53.)

Note: Be sure to adjust the tape path as instructed in 1-4 after remounting.

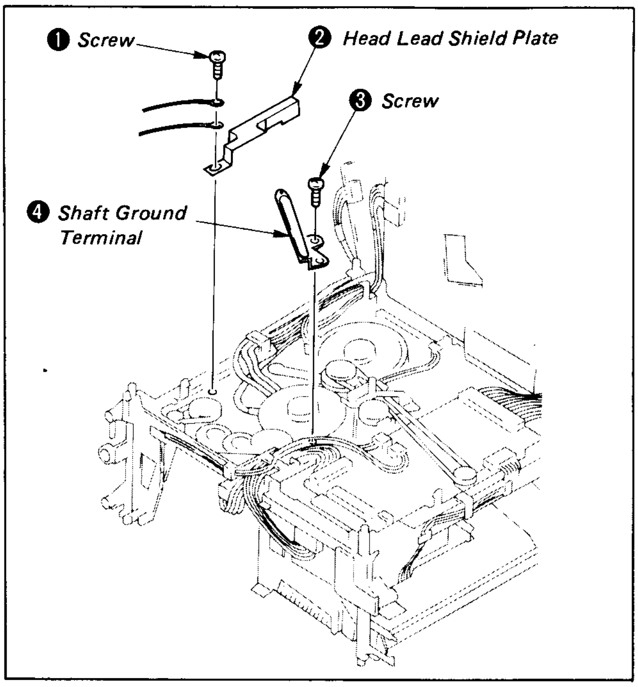

❶ Screw
❷ Head Lead Shield Plate
❸ Screw
❹ Shaft Ground Terminal

Fig. 1-53

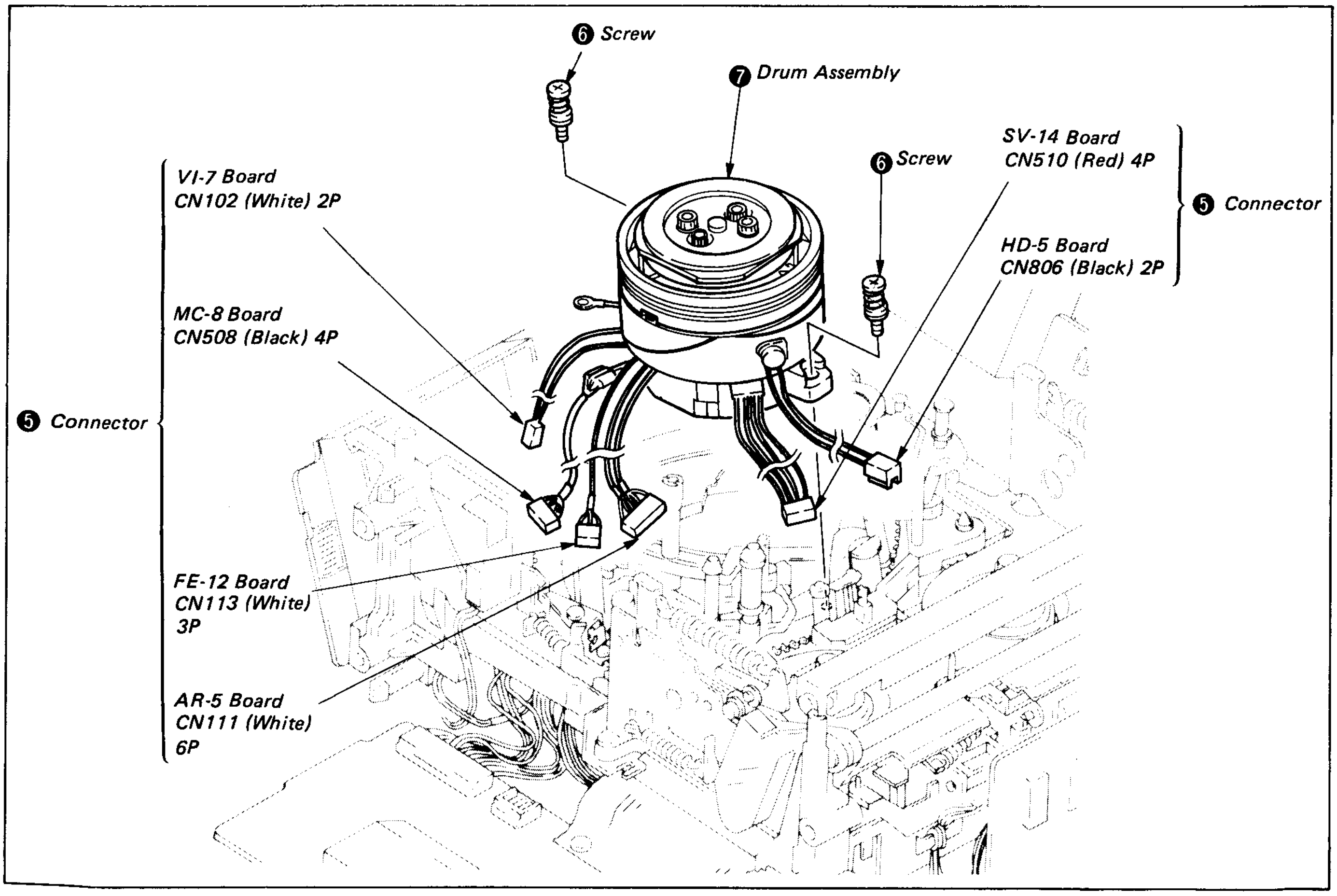

❻ Screw
❼ Drum Assembly
❻ Screw
SV-14 Board
CN510 (Red) 4P
HD-5 Board
CN806 (Black) 2P
❺ Connector
VI-7 Board
CN102 (White) 2P
MC-8 Board
CN508 (Black) 4P
❺ Connector
FE-12 Board
CN113 (White)
3P
AR-5 Board
CN111 (White)
6P

Fig. 1-54

1-3-20. Adjustment After Replacing No. 3 and 4 Guides

Run the tape on the upper flanges for both No. 3 and 4 guides after replacing them. (See Fig. 1-90.)

1-3-21. No. 5 Guide Assembly

1. Removal

1) Remove the tape stopper as instructed in 1) of 1. Removal in 1-3-10.
2) Remove three screws ❶ and No. 5 guide assembly.
3) Remove the guide nut ❷ , the spring ❸ and the shaft ❹ . (See Fig. 1-55.)

2. Remounting

1) Reinsert the spring ❸ in the shaft ❹ , reengage the dent and bump in the lower parts, and tighten the guide nut ❷ .
2) Remount the No. 5 guide assembly and tighten three screws ❶ . (See Fig. 1-55.)
3) Remount the tape stopper as instructed in 5) of 2. Remounting in 1-3-10.

Note: Be sure to adjust the tape path as instructed in 1-4 after remounting.

1-3-22. FWD Back Tension Adjustment

1) Set up the LOADING END and FWD modes.
2) Loosen the screw ❷ of the band adjustment plate ❶ , adjust the slit ❸ and pin ❹ of the tension regulator arm assembly to be in the position shown by the arrow Ⓐ in the Fig. 1-56, then tighten the screw ❷ .
3) Place the reel (Ref. No. J-7) ❻ to measure tensions on the S reel table ❺ and run a tape along No. 1, 2 and 3 guides and the drum.

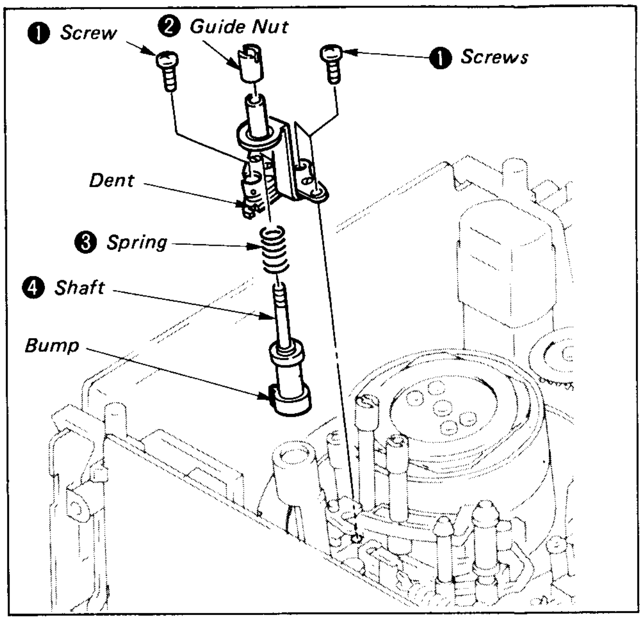

❶ Screw
❷ Guide Nut
❶ Screws
Dent
❸ Spring
❹ Shaft
Bump

Fig. 1-55

4) Pull the dial tension gauge (Ref. No. J-6) ❼ in the arrow Ⓑ direction and re-place the spring ❾ on the tension regulator spring hook assembly ❽ as mentioned below so that the value becomes 13.0 ±1g. (See Fig. 1-56.)

Larger than standard . . . . .Arrow Ⓒ direction
Smaller than standard. . . . . Arrow Ⓓ direction

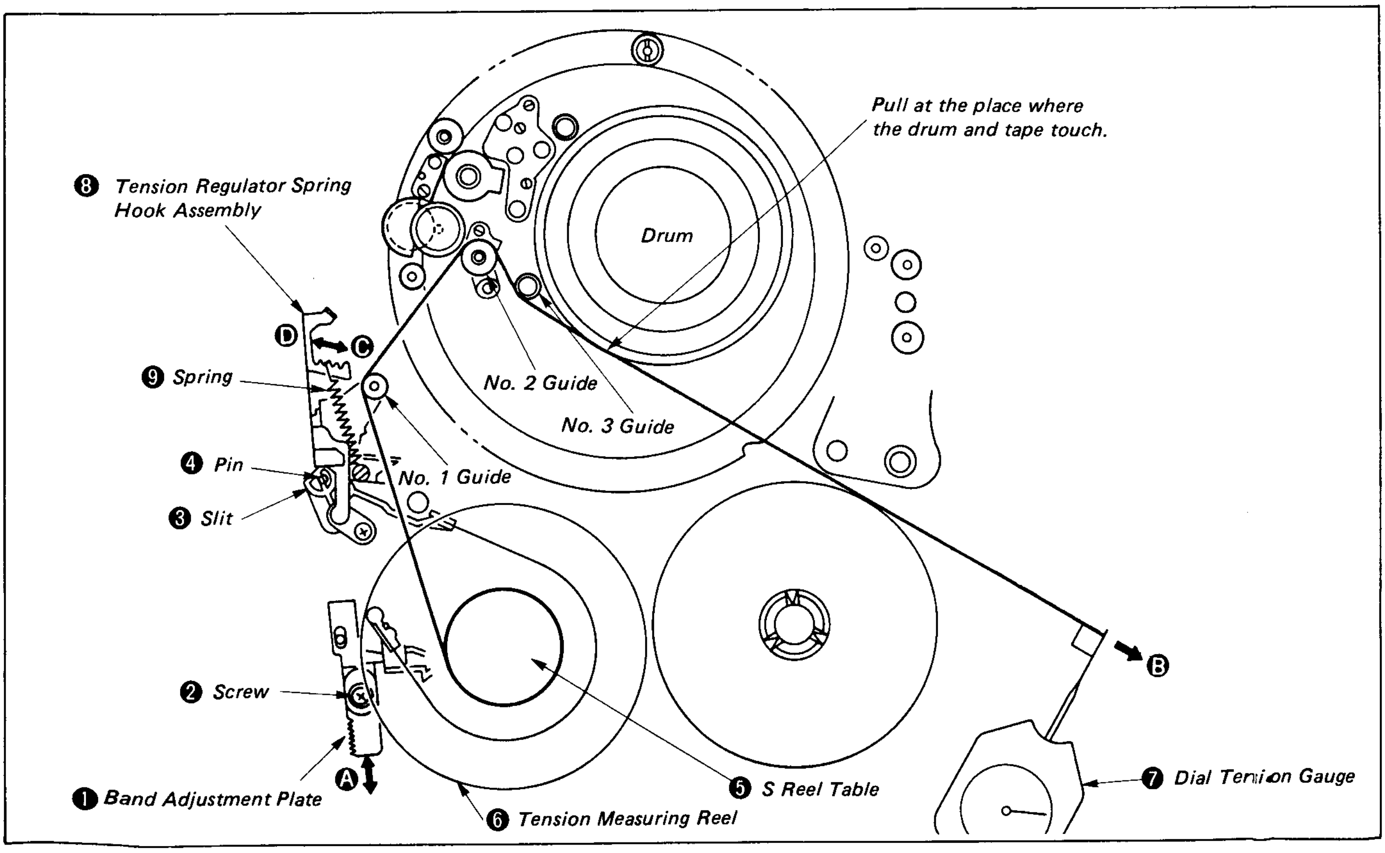

Pull at the place where the drum and tape touch.
❽ Tension Regulator Spring Hook Assembly
Drum
Ⓓ
Ⓒ
❾ Spring
No. 2 Guide
No. 3 Guide
❹ Pin
No. 1 Guide
❸ Slit
Ⓑ
❷ Screw
Ⓐ
❶ Band Adjustment Plate
❺ S Reel Table
❻ Tension Measuring Reel
❼ Dial Tension Gauge

Fig. 1-56

1-3-23. Checking and Adjustment of Timing Belt Tension

1) Remove the timing belt. (Refer to 1) of 1. Removal in 1-3-15.)
2) Cover the LED photodetector section (HD-5 Board) for tape end detection with a vinyl tape, and load.
3) Short TP603 and TP604 on the SK-6 Board. (See Fig. 1-57.)
4) Disengage the pinch press arm side (round hook side) of the tension spring hooked on the pinch press arm assembly. (See Fig. 1-58.)
5) Hold the safety pin of the RECOG switch (rec proof side) and tape it. press the REC button to set up the REC mode. (See Fig. 1-59.)
6) Measure the voltage (Vo) between CAP I_1 and CAP I_2 on the SV-14 Board using an analog tester. (No-load state) (See Fig. 1-60.)
7) Remount the timing belt. (Refer to 4) of 2. Remounting in 1-3-16.
8) Remove the driving gear (B) assembly as instructed in 3) of 1. Removal in 1-3-14.
9) Measure the voltage (Vx) between CAP I_1 and CAP I_2 as in 6) after setting up the REC mode as mentioned in 5). (When adjusting the belt tension.)
10) Check that the voltage (Vx) during tension adjustment is 22 to 44mV higher than the voltage (Vo) in a no-load state. Adjust as follows if the voltage is not as required.

Adjustment Method:

i) Loosen the screw ❶ , slide the idler assembly as shown by the arrow Ⓐ , and fix it by tightening the screw ❶ . (See Fig. 1-61.)
ii) Recheck after performing Step 9).
iii) Repeat i) and ii) until the standard is satisfied.

11) Remove the short between TP603 and TP604 on the SK-6 Board.
12) Remount the driving gear (B) assembly and the tension spring of the pinch press arm assembly.

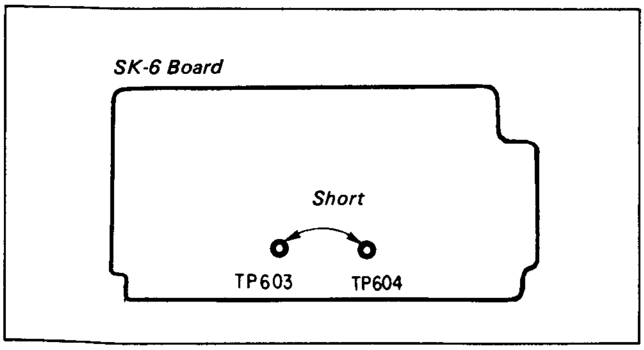


Fig. 1-57

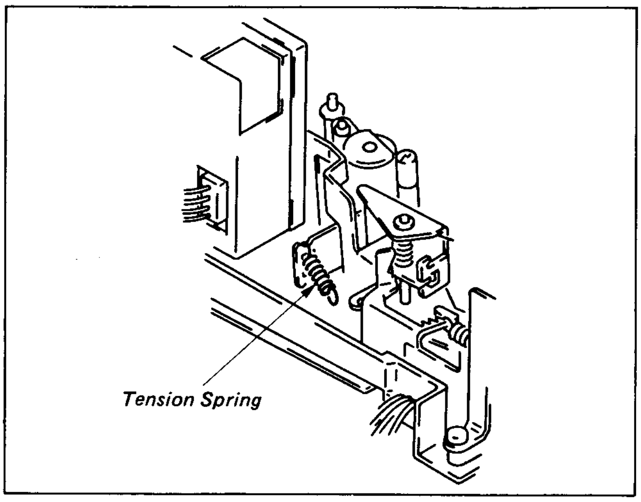


Fig. 1-58

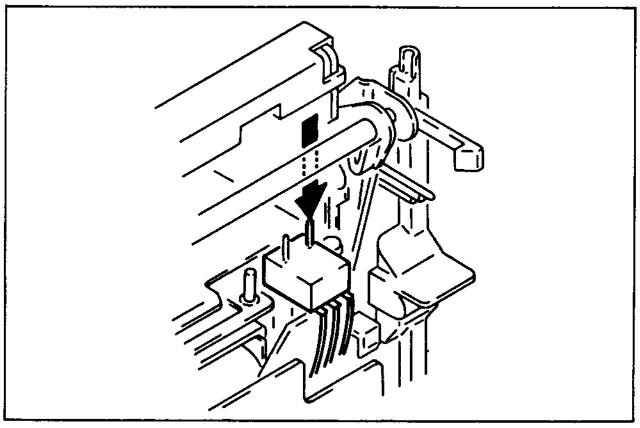


Fig. 1-59

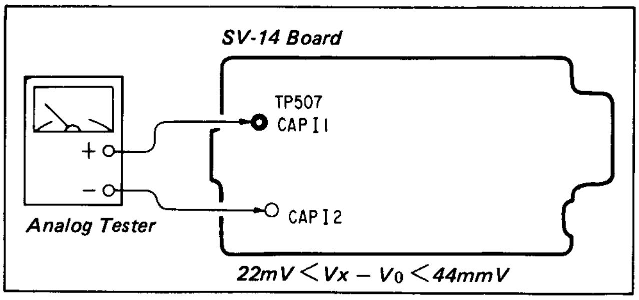


Fig. 1-60

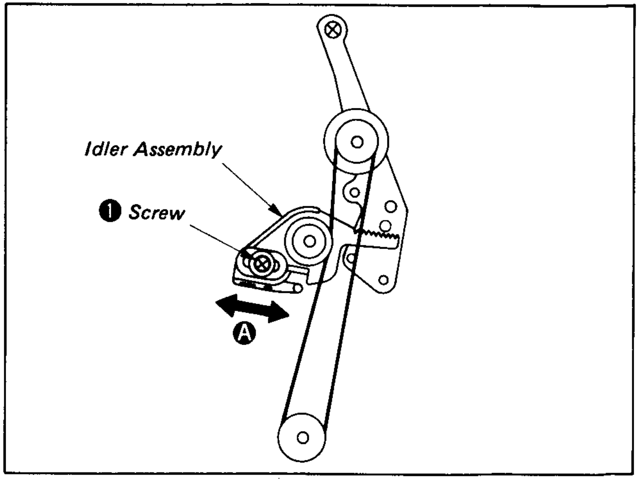


Fig. 1-61

1-3-24. Checking S and T Main Brake Torques

1) Open the control panel as instructed in section 2 disassembly. (See page 17.)
2) Remove the cassette compartment assembly as instructed in 1-1-1.

1. S main brake torque

1) Set up the FF/REW mode.
2) place the tension measuring reel (Ref. No. J-8) on the S reel table.
3) Pull the dial tension gauge (Ref. No. J-6) toward the arrow and check that the value satisfies the required value. (See Fig. 1-62 and 63.)

2. T main brake torque

1) Set up the FF/REW mode.
2) Place the tension measuring reel (Ref. No. J-8) on the T reel table.
3) Pull the dial tension gauge (Ref. No. J-6) toward the arrow and check that the value satisfies the required value. (See Fig. 1-64 and 1-65.)

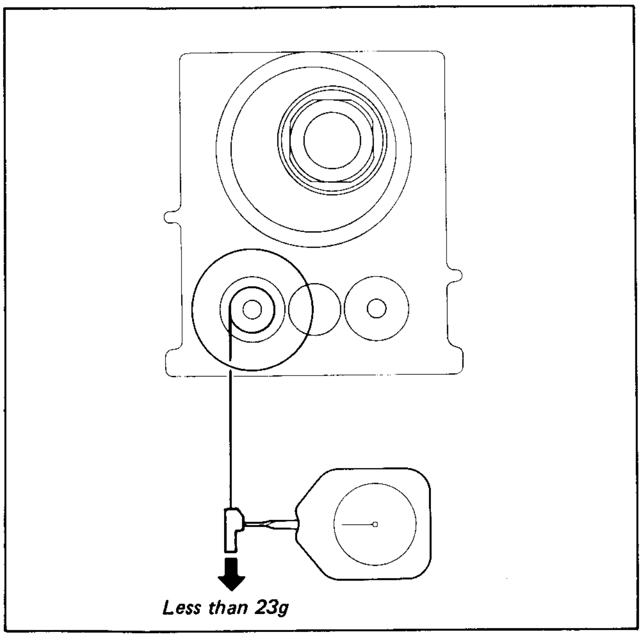


Fig. 1-62

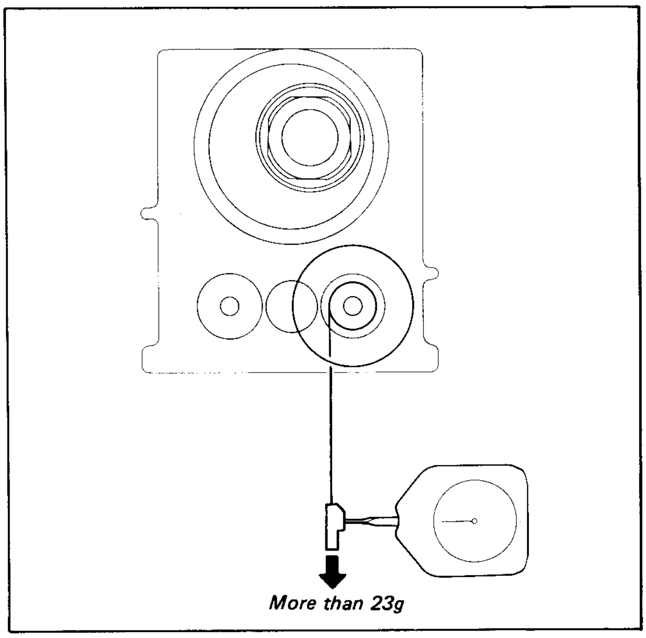


Fig. 1-64

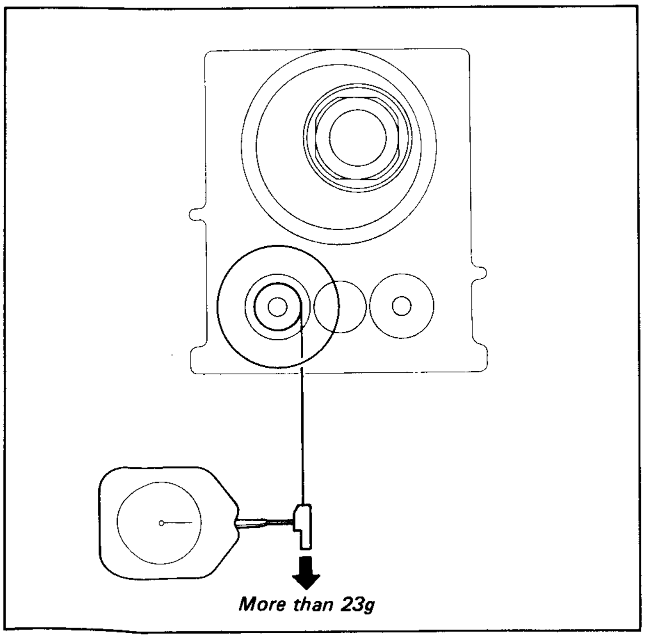


Fig. 1-63

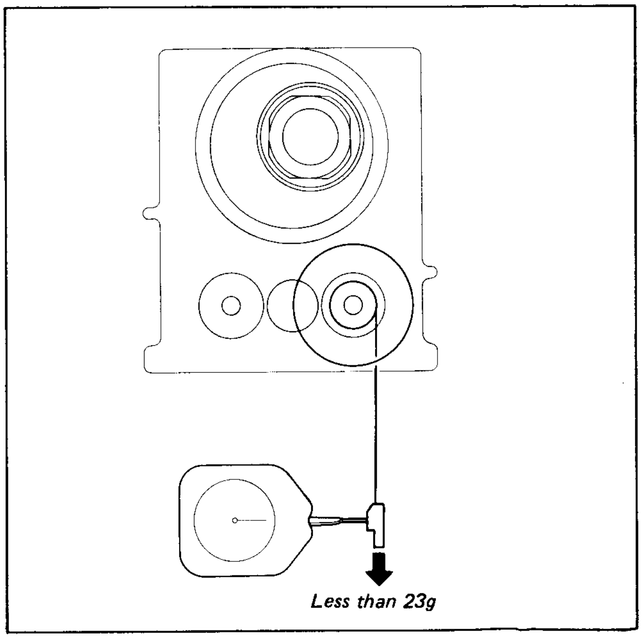


Fig. 1-65

1-3-25. Checking S and T Saft Brake Torques

1) Open the control panel as instructed in section 2 disassembly. (See page 17.)
2) Remove the cassette compartment assembly as instructed in 1-1-1.

1. S soft brake torque

1) Set up the FF/REW mode.
2) Place the tension measuring reel (Ref. No. J-8) on the S reel table.
3) Release the S main brake with a finger.
4) Pull the dial tension gauge (Ref. No. J-6) toward the arrow and check that the value satisfies the required value. (See Fig. 1-66.)

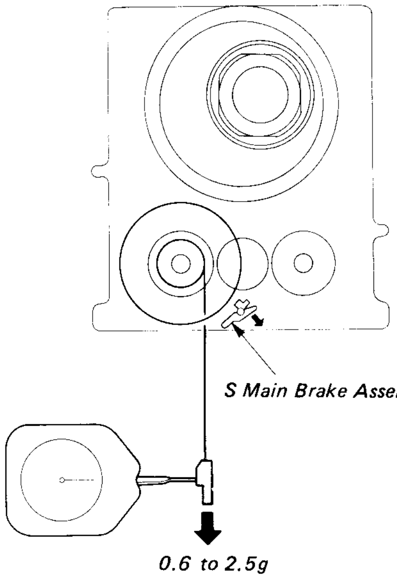


Fig. 1-66

2. T soft brake torque

1) Set up the REV mode.
2) Place the tension measuring reel (Ref. No. J-8) on the T reel table.
3) Release the T main brake with a finger.
4) Pull the dial tension gauge (Ref. No. J-6) toward the arrow and check that the value satisfied the required value. (See Fig. 1-67.)

Note: In the REV mode, both the T soft brake and REW brake are engaged.

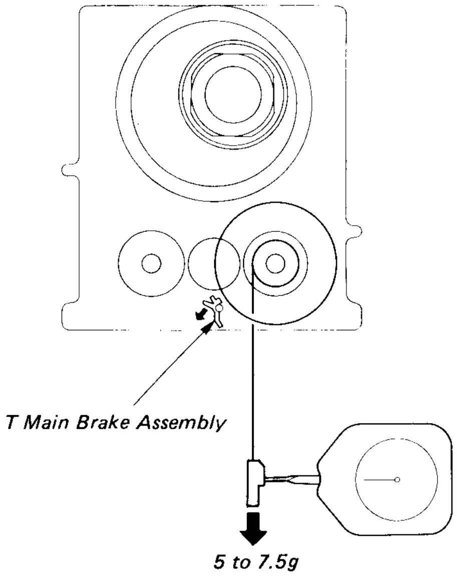


Fig. 1-67

1-3-26. Checking REV and REW Brake Torques

1) Open the control panel as instructed in section 2 disassembly. (See page 17.)
2) Remove the cassette compartment assembly as instructed in 1-1-1.

1. REV brake torque

1) Set up the REV mode.
2) Place the tension measuring reel (Ref. No. J-8) on the S reel table.
3) Release the S main brake assembly with a finger.
4) Pull the dial tension gauge (Ref. No. J-6) toward the arrow and check that the value satisfies the required value. (See Fig. 1-68.)

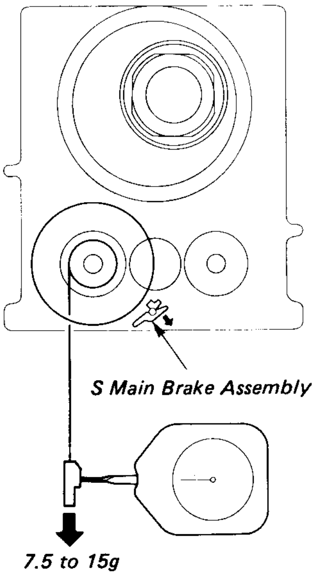


Fig. 1-68

2. REW brake torque

1) Set up the FF/REW mode.
2) Place the tension measuring reel (Ref. No. J-8) on the T reel table.
3) Pull the dial tension gauge (Ref. No. J-6) toward the arrow and check that the value satisfies the required value. (See Fig. 1-69.)

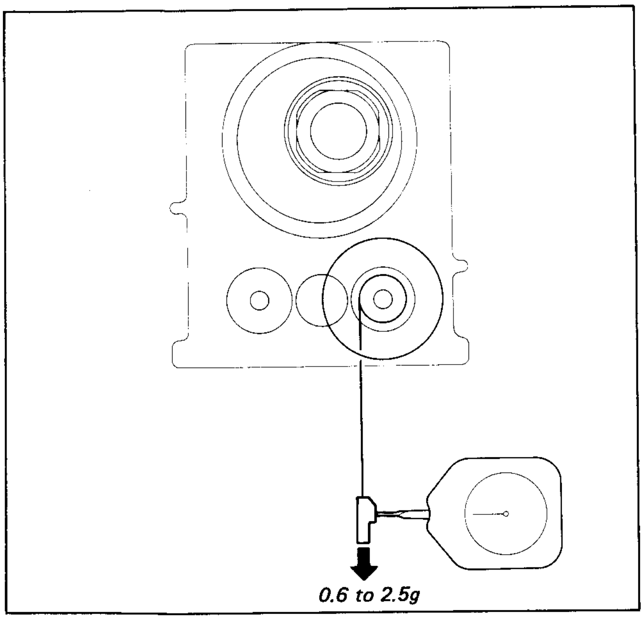
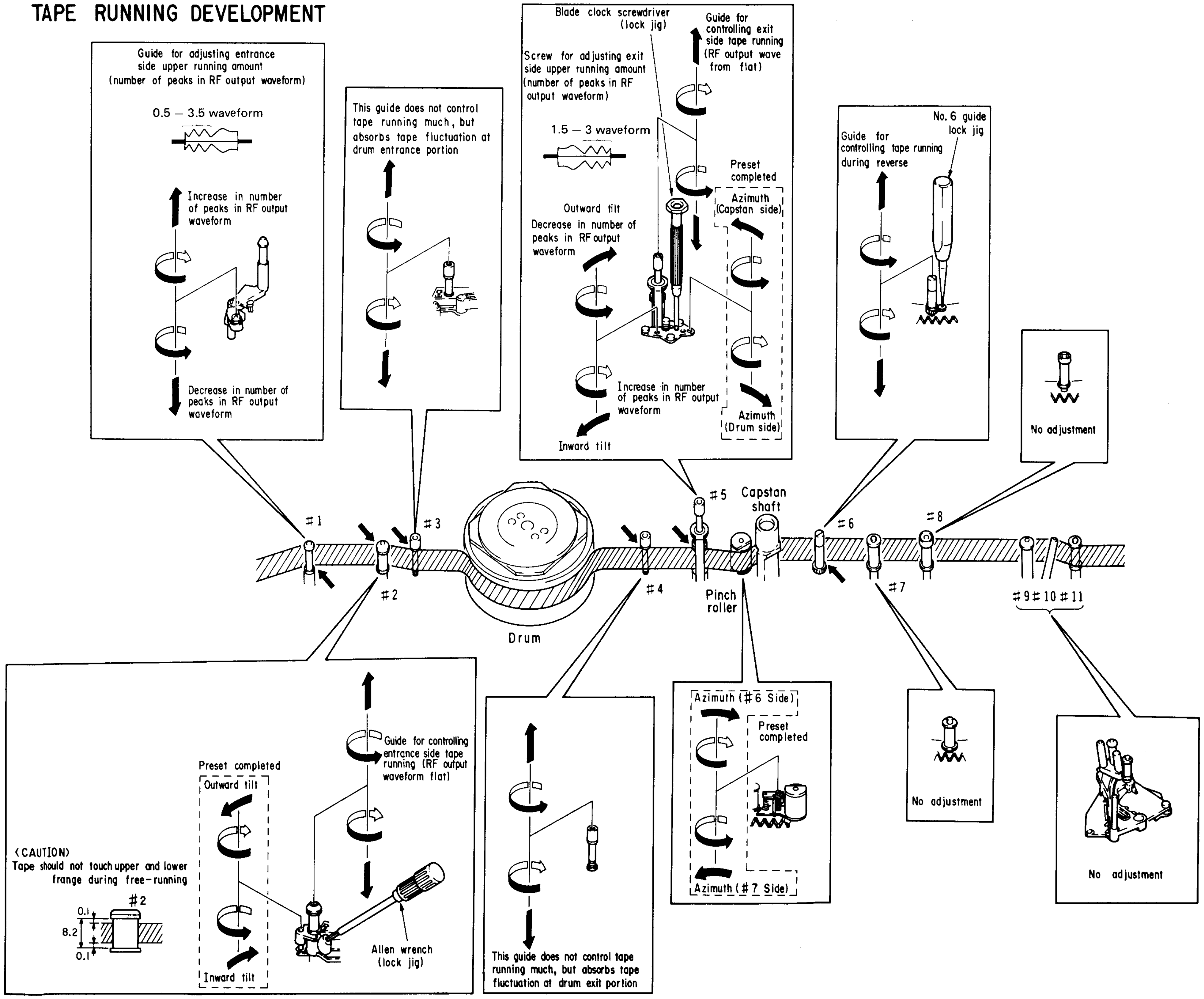


Fig. 1-69

1-3-27. Checking by FWD and RVS Take-Up Torques Cassette

1) Set the FWD and RVS take-up torque cassette (Ref. No. J-12).
2) Set up the PLAY BACK mode and check that the torque value on the T reel table side is 9.5 to 15.5g·cm.
3) Set up the PLAY BACK mode and check that the torque value on the S reel table side immediately after pressing the REW button is 17 to 23g·cm.
4) Replace the reel tables if the foregoing values are not satisfied.

TAPE RUNNING DEVELOPMENT


Guide for adjusting entrance side upper running amount (number of peaks in RF output waveform)
0.5 – 3.5 waveform
Increase in number of peaks in RF output waveform
Decrease in number of peaks in RF output waveform
This guide does not control tape running much, but absorbs tape fluctuation at drum entrance portion
Blade clock screwdriver (lock jig)
Screw for adjusting exit side upper running amount (number of peaks in RF output waveform)
1.5 – 3 waveform
Outward tilt
Decrease in number of peaks in RF output waveform
Increase in number of peaks in RF output waveform
Inward tilt
Guide for controlling exit side tape running (RF output wave from flat)
Preset completed
Azimuth (Capstan side)
Azimuth (Drum side)
No. 6 guide lock jig
Guide for controlling tape running during reverse
No adjustment
#1
#2
#3
Drum
#4
#5
Capstan shaft
Pinch roller
#6
#7
#8
#9 #10 #11
Guide for controlling entrance side tape running (RF output waveform flat)
Preset completed
Outward tilt
Inward tilt
Allen wrench (lock jig)
〈CAUTION〉
Tape should not touch upper and lower frange during free-running
#2
0.1
8.2
0.1
This guide does not control tape running much, but absorbs tape fluctuation at drum exit portion
Azimuth (#6 Side)
Preset completed
Azimuth (#7 Side)
No adjustment
No adjustment

1-4. TAPE PATH ADJUSTMENT

- **Make tape path adjustment after checking that electrical adjustment is made.**

1-4-1. Preparation for Adjustment

1) Clean the parts on which the tape runs (tape guide, drum, capstan spindle and pinch roller).
2) Connect an oscilloscope as follows:
   1CH: Pin ③ of CN112 (AR-5 Board): CH-2 output
   2CH: Pin ② of CN112 (AR-5 Board): External trigger
   (See Fig. 1-70.)

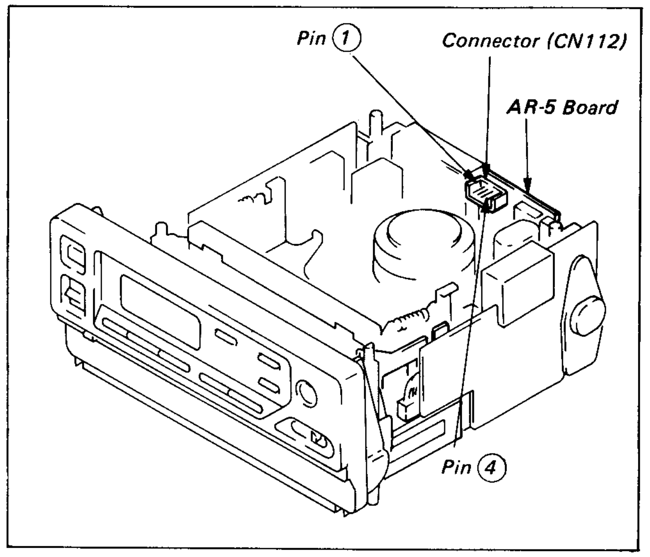

Pin ①
Connector (CN112)
AR-5 Board
Pin ④

Fig. 1-70

3) Replay the tracking alignment tape (WR5-1N) and check that the RF waveforms are flat (Fig. 1-71 ⓐ) on the inlet and outlet sides. If not, adjust as follows.

- If RF waveform on inlet side is not flat. (Fig. 1-71 ⓑ). . . Adjust as instructed in 1-4-2 Inlet side adjustment.
- If RF waveform on outlet side is not flat. (See Fig. 1-71 ⓒ) . . . Adjust as instructed in 1-4-3 Outlet side adjustment.

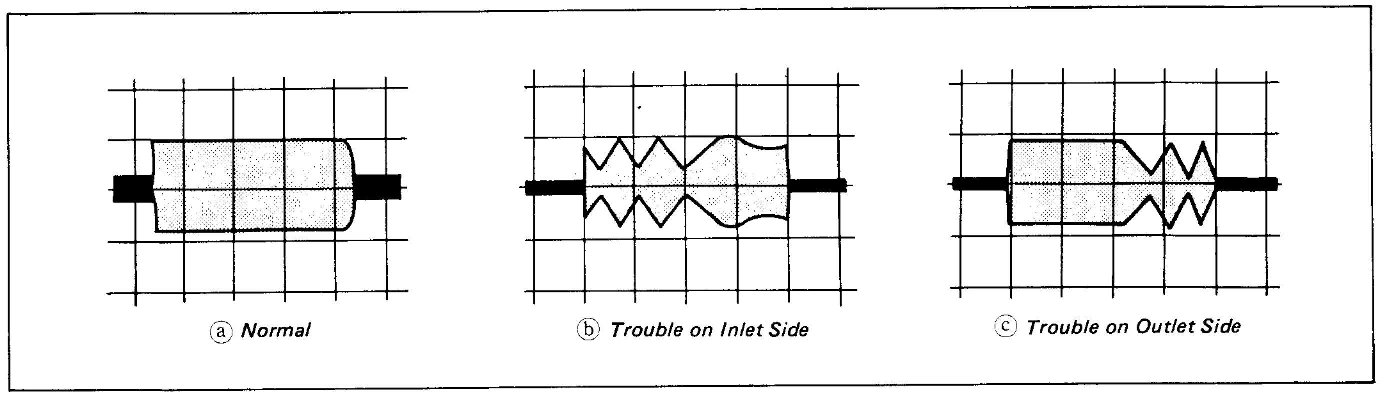

ⓐ *Normal*
ⓑ *Trouble on Inlet Side*
ⓒ *Trouble on Outlet Side*

Fig. 1-71

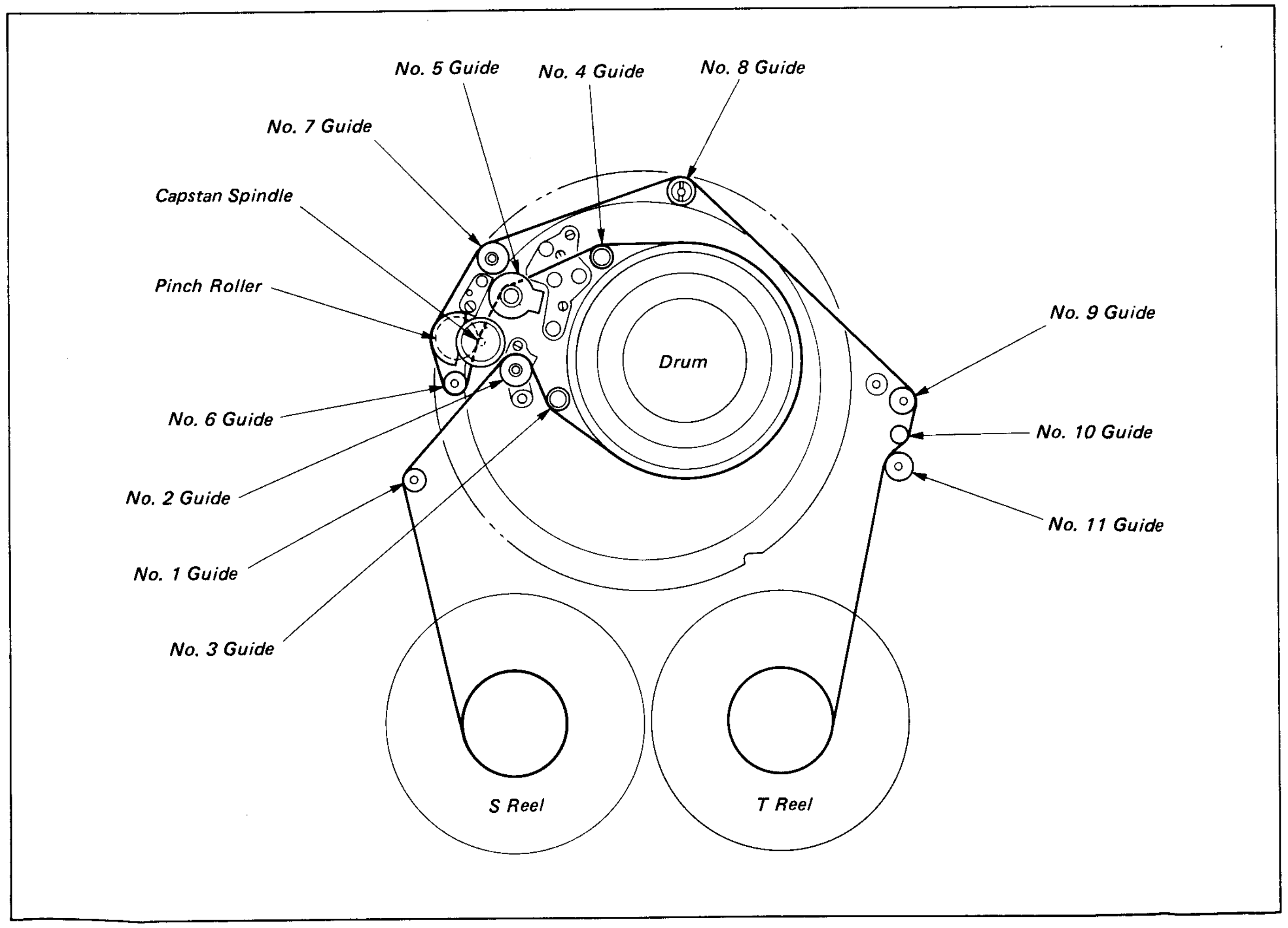

No. 5 Guide
No. 4 Guide
No. 8 Guide
No. 7 Guide
Capstan Spindle
Pinch Roller
Drum
No. 9 Guide
No. 6 Guide
No. 10 Guide
No. 2 Guide
No. 11 Guide
No. 1 Guide
No. 3 Guide
S Reel
T Reel

Fig. 1-72 Tape Guide Layout

1-4-2. Inlet Side Adjustment

1) Replay the tracking alignment tape, loose No. 2 guide lock screw ❶, rotate No. 2 and 3 guides counterclockwise, and free the tape run on the inlet side. (See Fig. 1-73.)

Note: The space between the top and bottom flanges of No. 2 guide is narrow. Check that the tape is contacting neither top nor bottom flanges this time. The tape contacts the bottom flange and the RF waveform on the inlet side will have more than 3.5 ridges if No. 2 guide is too loose.

2) Check that the RF waveform on the inlet side has 0.5 to 3.5 ridges in this condition. If not, adjust as follows. (See Fig. 1-74.)

Note: Do not touch the No. 2 guide gate screw ❷ since it has been preset at the factory.
If off standard, adjust the height adjustment screw of the No. 1 guide (tension regulator assembly) by turning it clockwise 90° at a time. (See Fig. 1-75.)

3) Slowly rotate No. 2 guide clockwise to make the inlet side waveform nearly flat. (See Fig. 1-76.)

Note: Do not rotate No. 2 guide excessively.

4) Rotate No. 3 guide clockwise to make the inlet side waveform completely flat, then rotate clockwise slightly (approximately 15°). (See Fig. 1-77.)

5) Check the tape curl of No. 3 guide flange. If tape is curled, rotate No. 2 guide clockwise little by little until the curling is eliminated.

6) Tighten No. 2 lock screw ❶. (See Fig. 1-73.)

Note: Check the adjustment as mentioned in 1-4-4.

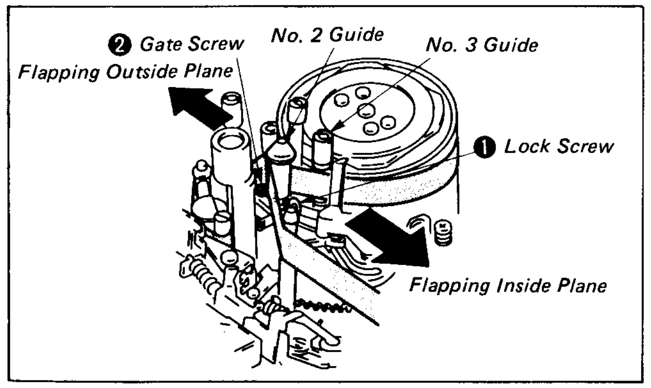

❷ Gate Screw
No. 2 Guide
No. 3 Guide
Flapping Outside Plane
❶ Lock Screw
Flapping Inside Plane

Fig. 1-73

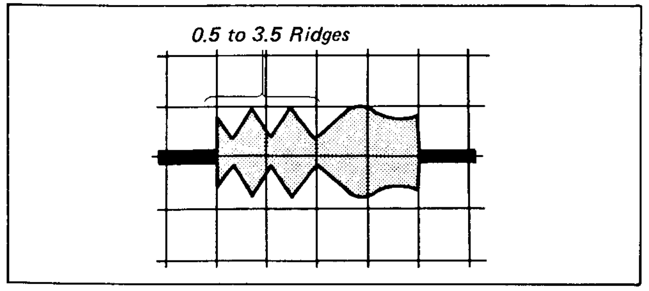

0.5 to 3.5 Ridges

Fig. 1-74

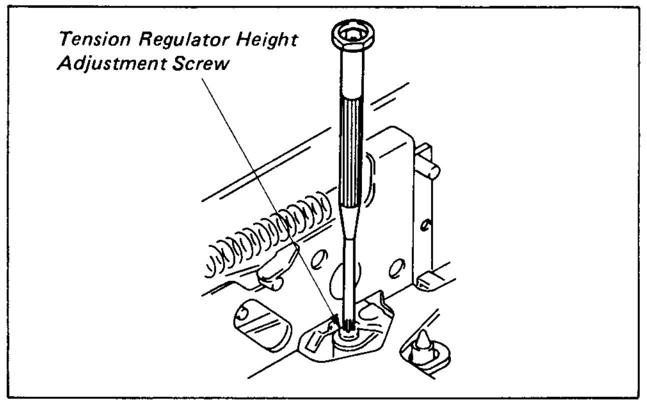

Tension Regulator Height
Adjustment Screw

Fig. 1-75

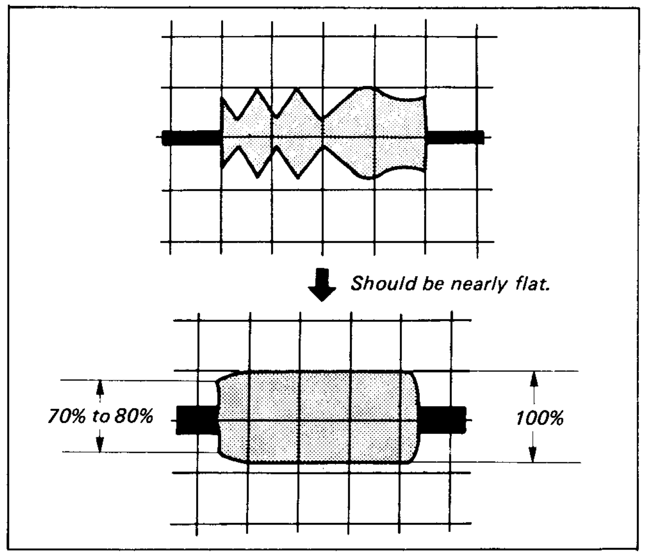

Should be nearly flat.
70% to 80%
100%

Fig. 1-76

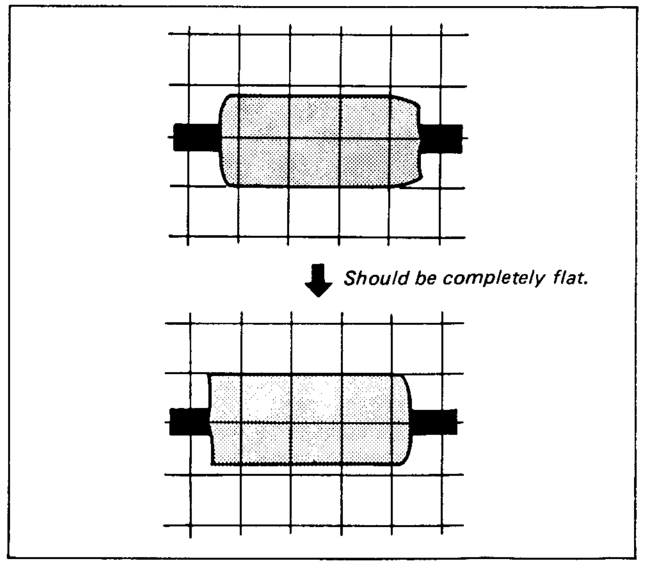

Should be completely flat.

Fig. 1-77

1-4-3. Outlet Side Adjustment

- Start this adjustment by removing the tape stopper as instructed in 1) of 1. Removal in 1-3-10.

1) Play back the tracking alignment tape, rotate No. 4 guide counterclockwise and No. 5 guide clockwise, respectively, then free the tape running on the outlet side. (See Fig. 1-78.)

Note:
- A screw lock agent sticking No. 5 guide nut may prevent the nut from rotating. Rotate the guide after immersing alcohol in the nut thread and dissolving the screw lock agent.
- Check that the tape is not contacting the top and bottom flanges of No. 5 guide during free tape running.

2) Check that the RF waveform on the outlet side has 1.5 to 3 ridges. If not, readjust as follows. (See Fig. 1-79.)

If off standard

i) Rotate the lock screw ❶ counterclockwise to loosen.
ii) Slowly rotate the gate screw ❷ by 45° and wait until the RF waveform changes.
iii) Rotate the lock screw ❶ clockwise to tighten. (See Fig. 1-78.)

Note:
- The waveform changes if the lock screw is tightened too tightly. Tighten moderately.
- Never rotate the azimuth screw of No. 5 guide.

3) Rotate No. 5 guide counterclockwise to make the RF waveform on the outlet side nearly flat. (See Fig. 1-80.)

Note: The waveform reaction is slow to nut rotation. Rotate the nut after the waveform variations are stabilized.

4) Rotate No. 4 guide clockwise to make the RF waveform on the outlet side completely flat and slightly rotate clockwise (approximately 15°) from this condition. (See Fig. 1-81.)
5) Check tape curling of No. 4 guide flange. Rotate No. 5 guide nut counterclockwise little by little until curling is eliminated if the tape is curled.

Note: Be sure to check as mentioned in 1-4-4 after making the adjustment.

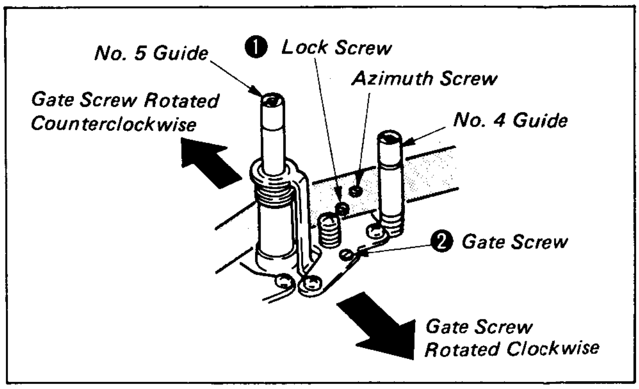

No. 5 Guide
❶ Lock Screw
Azimuth Screw
Gate Screw Rotated Counterclockwise
No. 4 Guide
❷ Gate Screw
Gate Screw Rotated Clockwise

Fig. 1-78

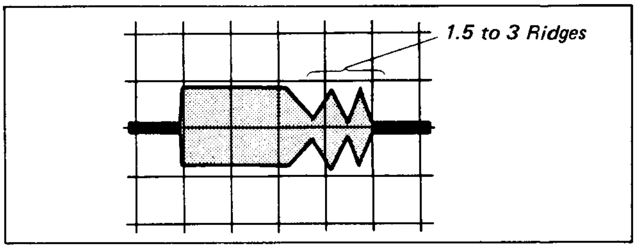

1.5 to 3 Ridges

Fig. 1-79

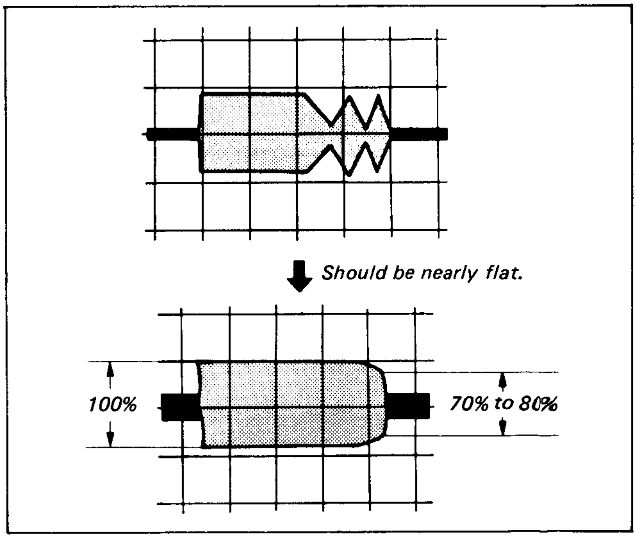

Should be nearly flat.
100%
70% to 80%

Fig. 1-80

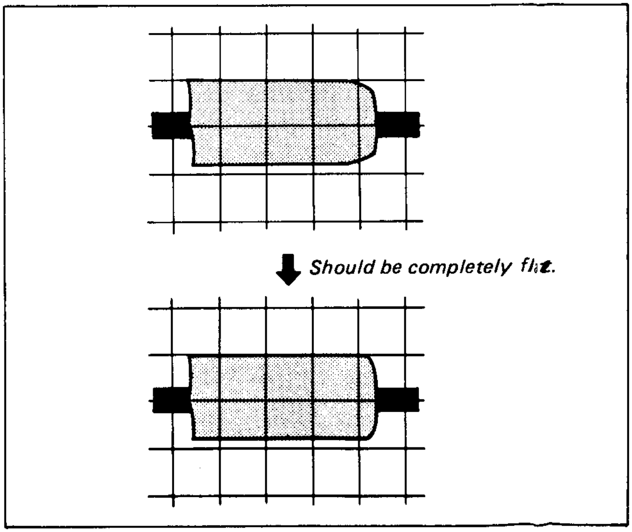

Should be completely flat.

Fig. 1-81

1-4-4. Checking After Adjustment

1. Tracking check

1) Record TV signals, play back recorded signals, and check that quality of both pictures and sounds is satisfactory.
2) Play back the tracking alignment tape and check that RF waveforms do not have large variations.
3) Set up the REV mode and check that the waveform noise pitches are uniform. If not, adjust as follows. (See Fig. 1-82.)

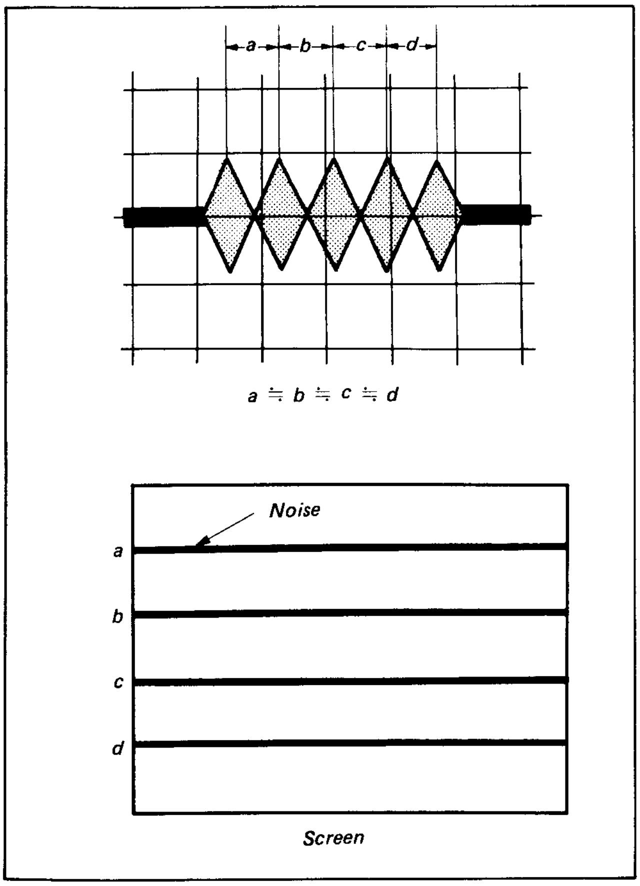


Fig. 1-82

[Narrow noise pitch on inlet side (upper screen)]

(See Fig. 1-83.)

Check that the RF waveforms are flat in the PLAYBACK mode.

Waveform is not flat:

Adjust the heights of No. 2 and 3 guides as in 1-4-2 Inlet side adjustment.

Waveform is flat:

Rotate No. 1 guide (tension regulator height adjusting screw) and No. 2 guide gate screw 90° counterclockwise to recheck. (See Fig. 1-75.)

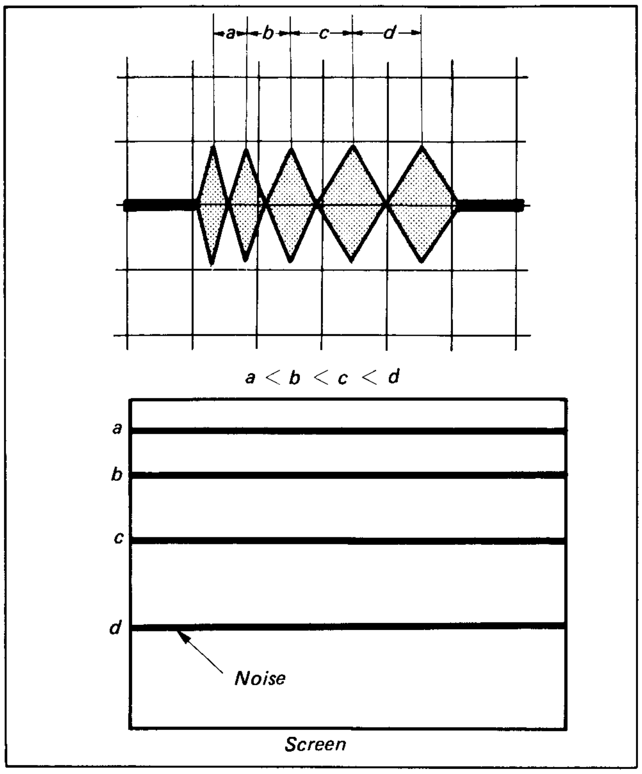


Fig. 1-83

[Narrow noise pitch on outlet side (lower screen)]

(See Fig. 1-84.)

Set up the PLAYBACK mode and adjust No. 4 and 5 guide heights as in 1-4-3. Outlet side Adjustment.

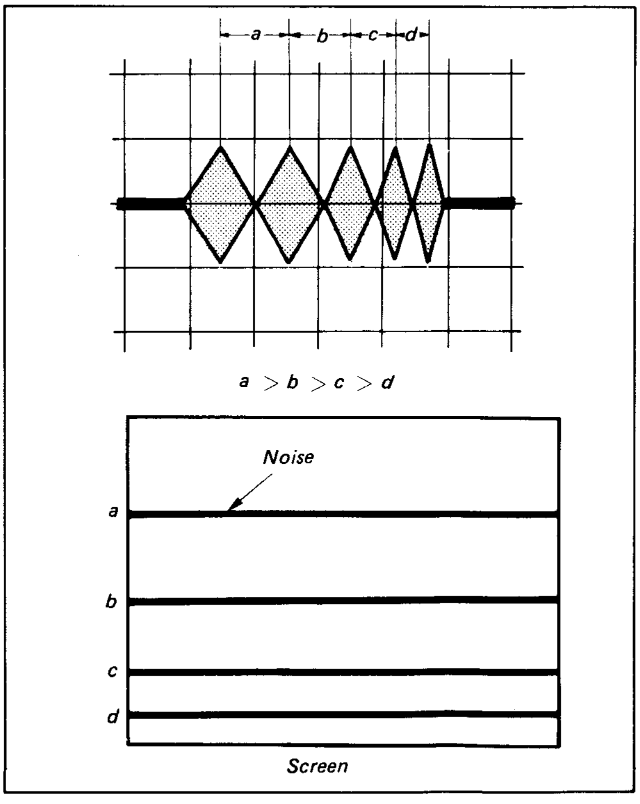


Fig. 1-84

[Wide noise pitch on outlet side (lower screen)]

(See Fig. 1-85.)

Set up the PLAYBACK mode and check that the RF waveform is flat.

Waveform is not flat:

Adjust height of No. 4 and 5 guides as in 1-4-3. Outlet side adjustment.

Waveform is flat:

Rotate the guide lower toothed wheel counterclockwise by No. 6 guide lock jig (Ref. No. J-11) to loosen the toothed wheel. Rotate No. 6 guide counterclockwise 45° to tighten the lower toothed wheel. Recheck the RF waveform of the REV mode. (See Fig. 1-86.)

Note: Wrinkles may be caused in Part Ⓐ between the capstan spindle and No. 5 guide if No. 6 guide is raised excessively. Check that no wrinkles are caused. (See Fig. 1-87.)

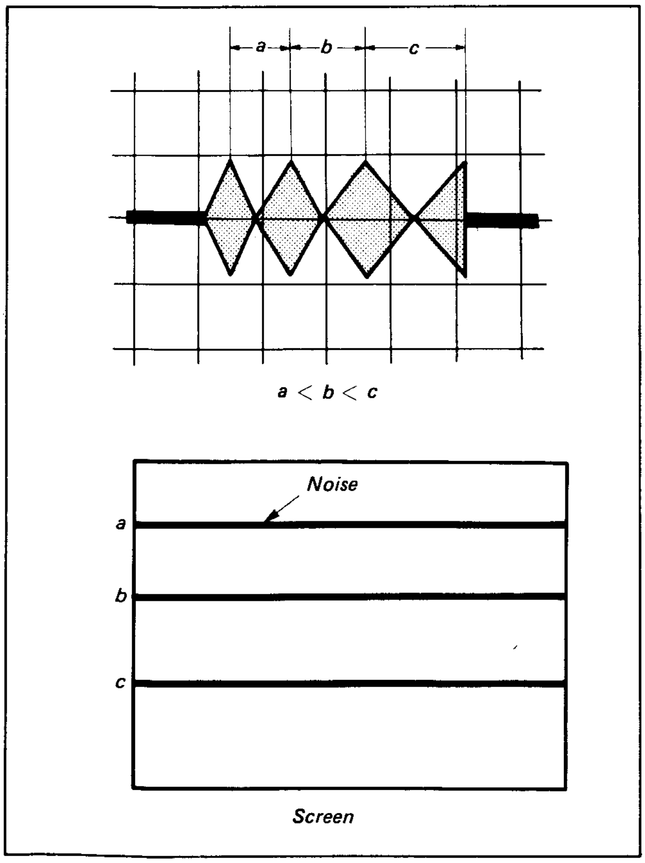

a
b
c
a < b < c
Noise
a
b
c
Screen

Fig. 1-85

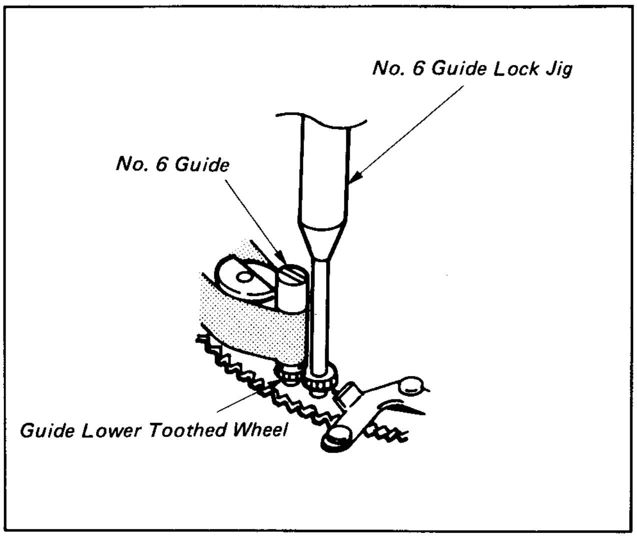

No. 6 Guide Lock Jig
No. 6 Guide
Guide Lower Toothed Wheel

Fig. 1-86

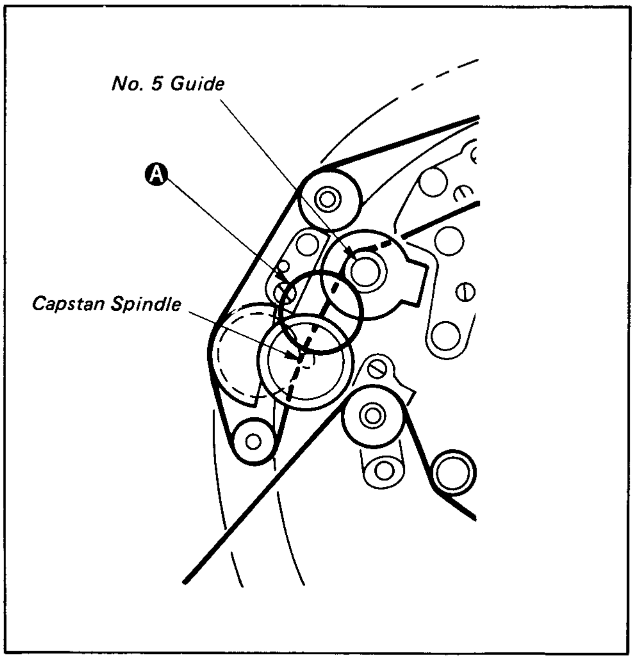

No. 5 Guide
A
Capstan Spindle

Fig. 1-87

2. Checking rising edge

1) Check that the RF waveform rises horizontally during playing back after finishing loading, after CUE/REV, and during playing back after FF. If not, adjust as follows.

[Noise occurs on outlet side (lower screen) with rising during playing back after finishing loading] (See Fig. 1-88.)

Check that the FWD back tension is not too low.

If toolow:

Readjust as instructed in 1-3-21. FWD back tension adjustment.

If normal:

Rotate the azimuth screw of the pinch roller clockwise by 15° and adjust after rechecking the rising edge. (See Fig. 1-89.)

[Noise occurs on outlet side (lower screen) with rising during playing back after REV] (See Fig. 1-88.)

Loosen the guide lower toothed wheel of No. 6 guide using No. 6 guide lock jig, rotate No. 6 guide 90° counterclockwise to tighten the toothed wheel, then recheck the rising edge.

Note: Wrinkles may be caused in Part Ⓐ of Fig. 2-93 if No. 6 guide is raised excessively this time, between the capstan spindle and No. 5 guide, check that no wrinkles are caused.

[Noise occurs on outlet side (lower screen) with rising during playing back after FF] (See Fig. 1-88.)

Check that the FWD back tension is not too low.

If too low:

Readjust as required in 1-3-21. FWD back tension adjustment.

If normal:

Rotate the azimuth screw of the pinch roller clockwise by 15° and adjust after checking the rising edge. (See Fig. 1-89.)

Note: Be sure to check playback rising after finishing loading in case an adjustment is made.

3. Tape run check

Check that the tape is not raised or curled at each guide flange of No. 1 to 6 (pointed by the arrows in Fig. 1-90) in PLAYBACK, CUE and REV modes.

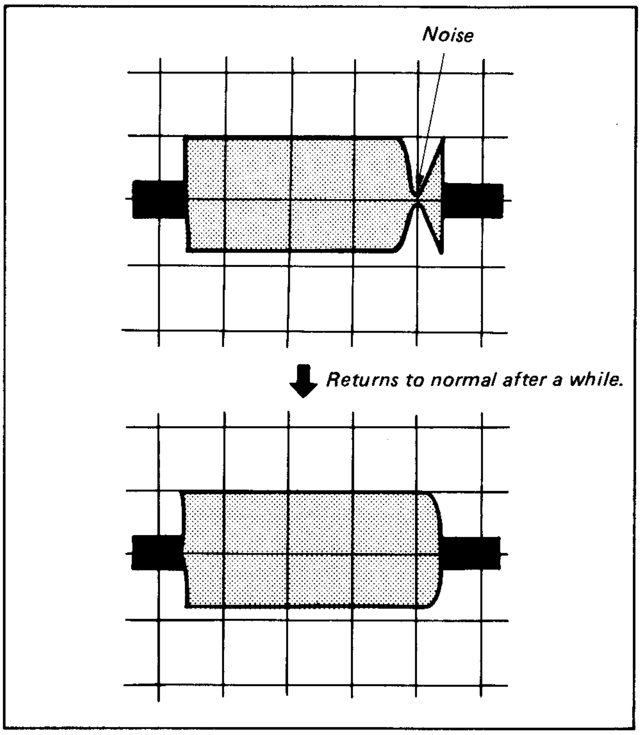

Noise
Returns to normal after a while.

Fig. 1-88

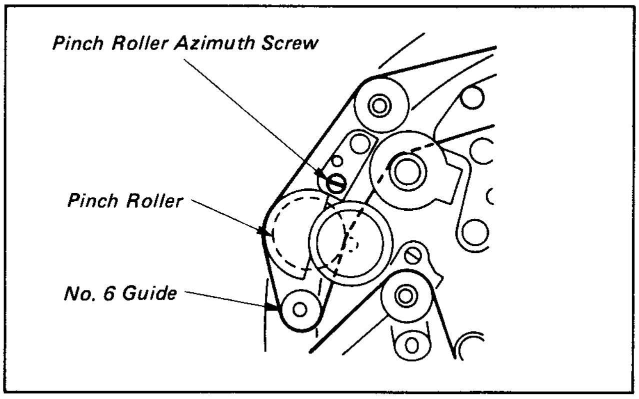

Pinch Roller Azimuth Screw
Pinch Roller
No. 6 Guide

Fig. 1-89

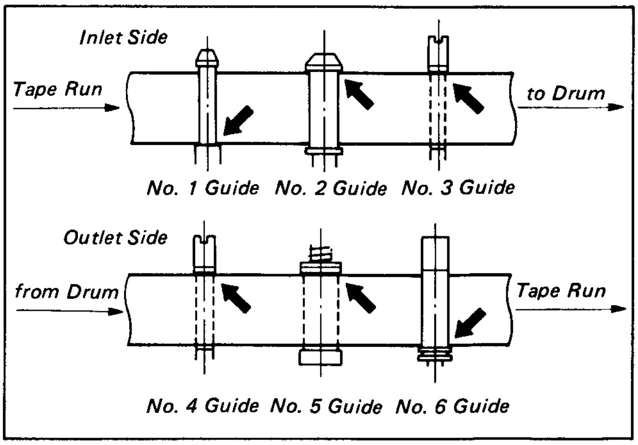

Inlet Side
Tape Run
to Drum
No. 1 Guide
No. 2 Guide
No. 3 Guide
Outlet Side
from Drum
Tape Run
No. 4 Guide
No. 5 Guide
No. 6 Guide

Fig. 1-90

2. ELECTRICAL ADJUSTMENT

The following measuring instruments are needed in adjusting the video section.

[Equipment]

1) Monitor TV
2) AC adapter or T/T unit
3) Oscilloscope, 2 phenomena, band 10MHz or wider, with delay mode (Use a 10:1 probe unless otherwise specified)
4) Frequency counter
5) Pattern generator, with video output terminal
6) Digital voltmeter
7) Audio generator
8) Audio level meter
9) Audio distortion meter
10) Audio attenuator
11) Regulated power supply
12) Alignment tapes
    Tracking adjustment (WR5-1C)
    Parts code: 8-967-995-06
    Video frequency characteristic adjustment (WR5-2C)
    Parts code: 8-967-995-16
    Operation checking (WR5-3CL)
    Parts code: 8-967-995-36

[Equipment Connection]

Unless otherwise specified, adjustment is made by connecting the measuring instruments as shown below.

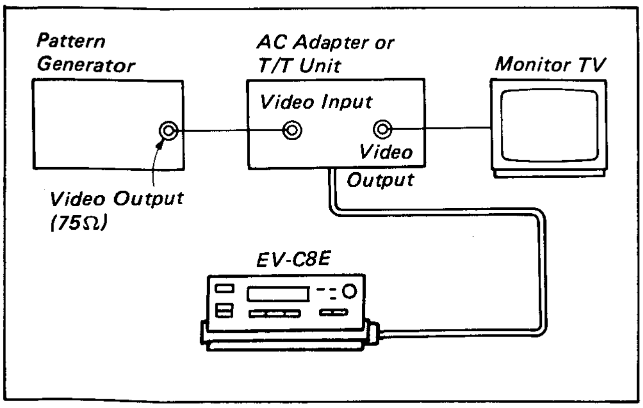

Pattern Generator
AC Adapter or T/T Unit
Monitor TV
Video Input
Video Output
Video Output (75Ω)
EV-C8E

Fig. 2-1

Setting up during adjustment

Video signals output by an pattern generator are used as adjustment signals when adjusting the video section, and these video output signals should be within the required standard. Connect an oscilloscope to TP121 (VIDEO IN) on the VI-7 Board. Check that the amplitudes of video signal SYNC signals, of picture portions, and of burst signals are flat at approximately 0.3, 0.7, and 0.3V, respectively, and that the level ratio of the burst signals and "red" signals are 0.30:0.66.

Fig. 2-2 shows video signals (colour bars) used in adjusting the video section.

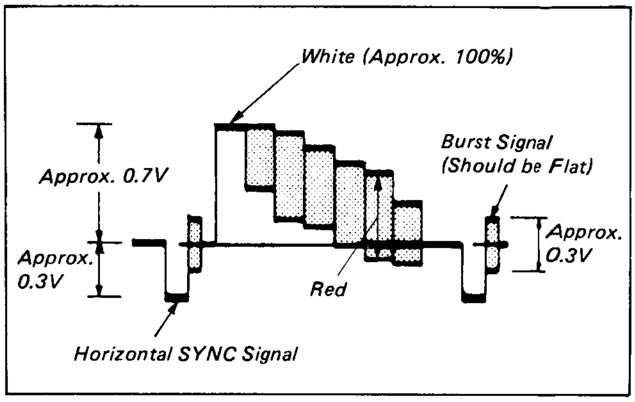
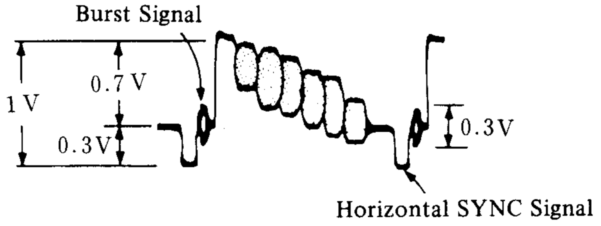
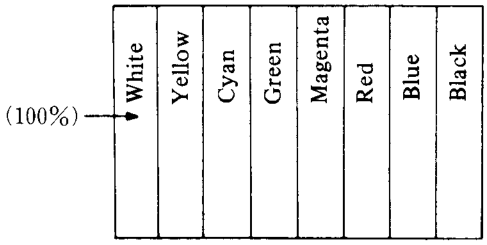

White (Approx. 100%)
Burst Signal (Should be Flat)
Approx. 0.7V
Approx. 0.3V
Approx. 0.3V
Red
Horizontal SYNC Signal

Fig. 2-2 Pattern Generator Colour Bar Signals

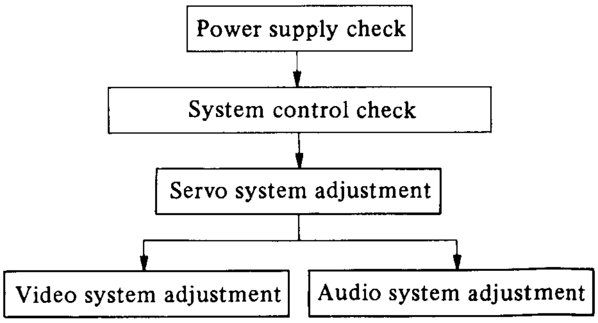
Tape	Content	Use
Tracking (WR5-1C)	1. Recording area: PCM – video 2. Recording content: CH2: 1MHz linearity adjustment signal (CH1: 9MHz)	Drum linearity adjustment
Video Frequency Characteristic (WR5-2C)	1. Recording area: Video 2. Recording content: RF sweep 0 to 10MHz 3. Marker: 1, 3.58, 5.5 and 7MHz	Frequency characteristic adjustment
Operation Checking (WR5-3CL)	1. Recording area: Video 2. Recording content: ● Video signals Colour bars 10sec } Iterative Monoscope 8sec (Colour bars)  Burst Signal 1 V 0.7 V 0.3V 0.3V Horizontal SYNC Signal  (100%) White Yellow Cyan Green Magenta Red Blue Black ● Audio signals 400Hz 60% modulation	Operation checking

Input/output level and impedance to T/T unit or AC adapter

Video input pin jack
Input signals: 1Vp-p, 75Ω unbalanced, sync negative
Video output pin jack
Output signals: 1Vp-p, 75Ω unbalanced, sync negative
Audio input pin jack
Input level: –6dBs (0dBs = 0.775Vrms)
Input impedance: 47kΩ or higher
Audio output pin jack
Regulated output: –6dBs
Load impedance: 47kΩ or higher

Adjustment Procedure

Adjust in the following sequence:


Power supply check
System control check
Servo system adjustment
Video system adjustment
Audio system adjustment

2-1. POWER SUPPLY ADJUSTMENT

2-1-1. DC/DC Converter Frequency Adjustment (HD-5 Board)

Mode: E-E
Frequency counter: Pin ⑩ of IC802

Note: Connect the frequency counter through the oscilloscope.

[Adjustment Method]

Adjust to 95.0 ±0.5kHz with RV802.

2-1-2. DC/DC Converter Output Voltage Adjustment (HD-5 Board)

Mode: E-E
Digital voltmeter: Pin ③ of CN006
(GND: Pin ⑥ of CN006)

[Adjustment Method]

Adjust to 5.07 ±0.02V with RV803.

2-2. SYSTEM CONTROL ADJUSTMENT

2-2-1. Battery Failure Adjustment (HD-5 and SK-6 Boards)

Cassette holder: A cassette tape should not be contained.
Multiconnector: Nothing shall be connected.
Regulated power supply and digital voltmeter: See Fig. 2-3.
Oscilloscope CH1: TP604 (SK-6 Board)
CH2: TP606 (SK-6 Board)

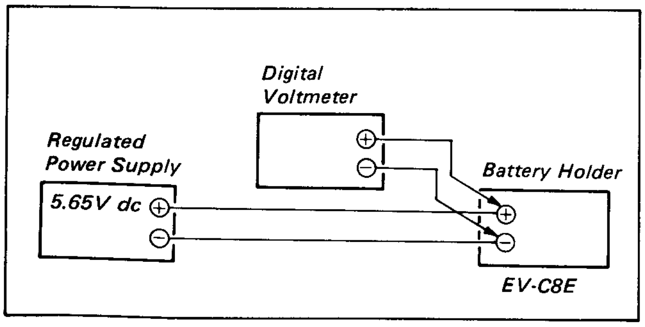


Fig. 2-3

[Adjustment Method]

1) Set the regulated power supply to 5.65V dc and turn on "VTR POWER".
2) Short TP603 and TP604 on the SK-6 Board by a jumper wire.
3) Rotate RV801 on the HD-5 Board and set to the position where a pulse is generated on CH2. (See Fig. 2-4.)
4) Rotate RV801 slowly in an opposite direction and stop it when the CH2 pulse disappears.
5) Disconnect the jumper wire.

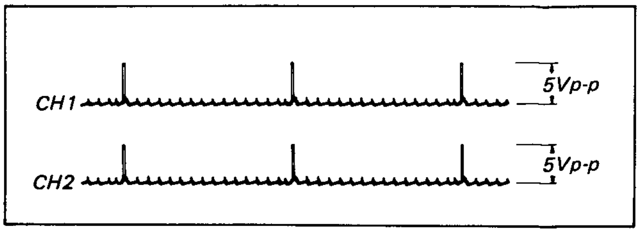


Fig. 2-4 Battery Failure Adjustment

2-2-2. Flying Erase Check (FE-12 Board)

Mode: RECORD
Oscilloscope: TP101

[Checking Method]

The oscillation frequency shall be 7MHz or more and level, 8.5Vp-p or more.

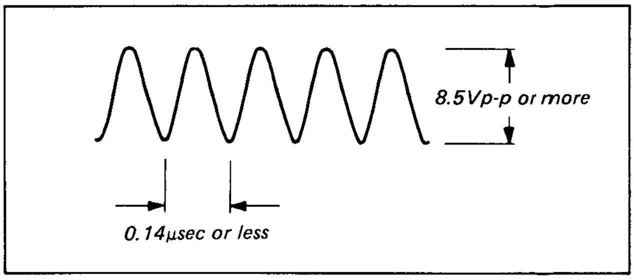


Fig. 2-5 Flying Erase Check

2-3. SERVO SYSTEM ADJUSTMENT

2-3-1. MOTOR POWER Voltage Adjustment (MC-8 Board)

Mode: E-E
Digital voltmeter: Pin ① of CN501

[Adjustment Method]

Adjust to 5.30 ±0.05V dc with RV601.

2-3-2. Capstan Free Speed Adjustment (SV-14 and AR-5 Boards)

Adjust in the sequence of SP mode and LP mode. Adjusting devices of LP mode are shown in [ ].
Mode: PLAYBACK
Tape: None recorded
Frequency counter: TP501 of SV-14 Board (CAP SP)
Connection 1: Connect TP104 (Pin ⑬ of IC101) and TP101 (REG GND) on the AR-5 Board using a 22μF/6.3V electrolytic capacitor. (TP104 is positive pole side)
Connection 2: Connect Pin ③ of CN512 (ATFLOCK) and Pin ④ of CN512 (GND) on the SV-14 Board using a jumper wire.

[Adjustment Method]

1) Set REC mode switch to SP mode [LP mode] and turn on VTR POWER.
2) Set up the PLAYBACK mode and adjust to 1341 ±2Hz [670 ±1Hz] using RV504 [RV503] on the SV-14 Board.

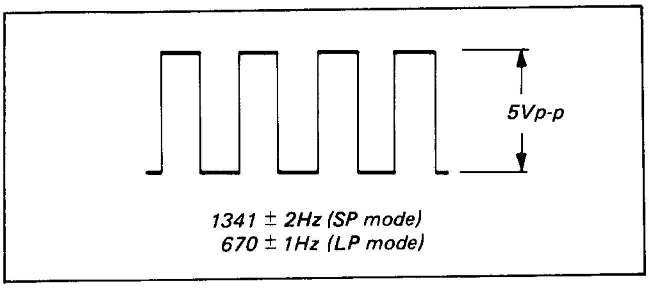


Fig. 2-6 Capstan Free Speed Adjustment

2-3-3. ATF Balance Adjustment (VI-7 and AR-5 Boards)

Mode: PLAYBACK
Alignment tape. Operation checking (WR5-3CL)
Oscilloscope: AR-5 Board Pin ④ of CN112 (RF CH1)

[Adjustment Method]

Maximize the RF output level with RV110 on the VI-7 Board.

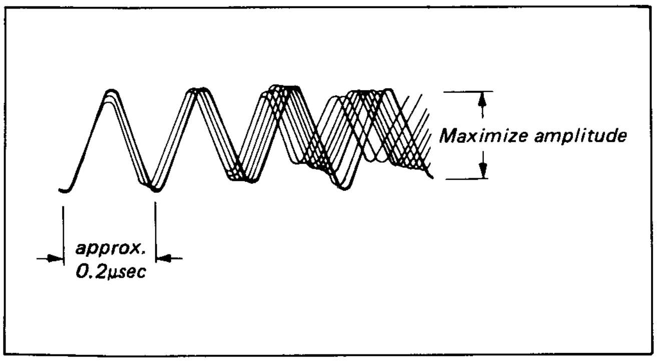


Fig. 2-7 ATF Balance Adjustment

2-3-4. Switching Position Adjustment (SV-14, VI-7 and AR-5 Boards)

Mode: PLAYBACK
Alignment tape: Operation checking (WR5-3CL)
Oscilloscope CH1: VI-7 Board TP108 (VIDEO OUT)
CH2: AR-5 Board Pin ② of CN112 (RF SW PULSE)

[Adjustment Method]

Adjust to 6.5 ±0.3H (416 ±20μsec) using RV502 on the SV-14 Board.

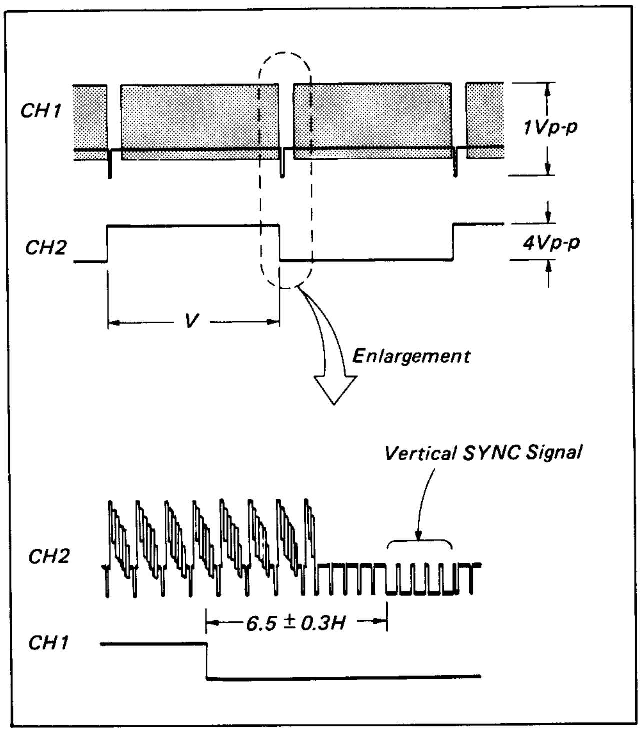


Fig. 2-8 Switching Position Adjustment

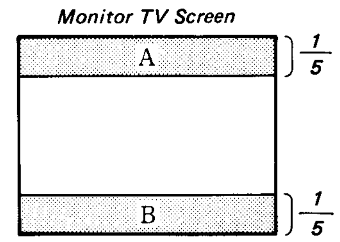
2-3-5. PB Pause Delay Time Adjustment (SV-14 Board)

Mode: PLAYBACK → PLAYBACK PAUSE
Tape: Operation checking (WR5-3CL)

[Adjustment Method]

Adjust while watching the monitor TV.

1) Set up the PLAYBACK mode and press the PAUSE button when playback pictures stabilize to set up the PLAYBACK PAUSE mode.
2) Check that noise is not shown on the TV screen in the PLAYBACK PAUSE mode. (See Fig. 2-9.)
3) Rotate RV501 and repeat Steps 1) and 2) if noise appears.



Noise standard: Noise should not appear in parts other than Part A or B.

Fig. 2-9 PLAYBACK PAUSE Delay Time Adjustment

2-4. VIDEO SYSTEM ADJUSTMENT

In principle, adjust the video system in the following procedure.
Colour video signals fed by a pattern generator are utilized as video input signals for video system adjustment in the RECORD mode. Check that the SYNC and colour burst signals match the standard designated in adjustment setting up shown in Fig. 2-2.

[Adjustment Procedure]

1) Playback frequency characteristic adjustment
2) PB Y trap adjustment
3) X'tal oscillator fo adjustment
4) 375 fH VCO adjustment
5) Y comb AGC adjustment
6) C comb AGC adjustment
7) SYNC AGC adjustment
8) VIDEO OUT level adjustment
9) PB Y level adjustment
10) Y FM carrier frequency adjustment
11) Y FM deviation adjustment
12 AC clip adjustment
13) Carrier balance adjustment
14) Chroma emphasis fo adjustment
15) REC C RF Trap adjustment
16) fH VCO adjustment
17) GCA GAIN adjustment
18) REC Y recording current adjustment
19) REC C recording current adjustment
20) REC ATF recording current adjustment

2-4-1. Playback Frequency Characteristic Adjustment (AR-5 Board)

CH2 adjusting devices are shown in [ ].
Moed: PLAYBACK
Alignment tape: Frequency characteristic adjustment (WR5-2C)
Oscilloscope CH1: Pin④ of CN112 [Pin③ of CN112]
External trigger: Pin② of CN112 [Pin② of CN112]
Trigger slope: +, [−]

[Adjustment Method]

Adjust the ratio between the 3.58 and 5.5MHz levels to 4:3 using RV102 [RV106].

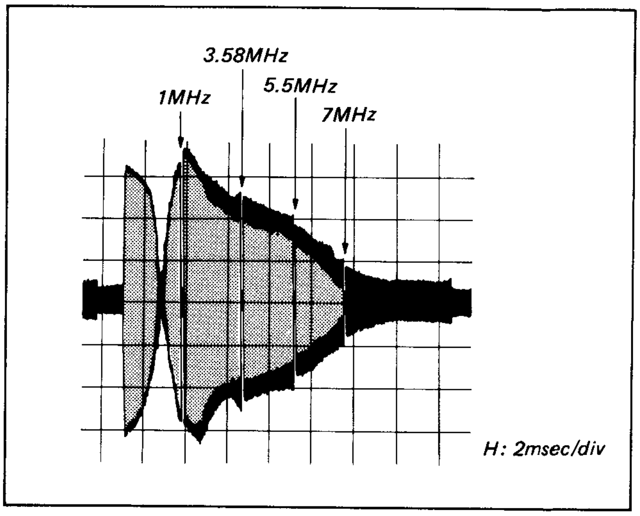


Fig. 2-10 Playback Frequency Characteristic Adjustment

2-4-2. PB Y Trap Adjustment (AR-5 Board)

Mode: Self-recording and PLAYBACK
Input signals: Colour bar

[Adjustment Method]

1) Record.
2) Play back recorded portions.
3) Rotate LV101 while watching the monitor TV screen and stop rotating when the beat is minimum.

2-4-3. X'tal Oscillator fo Adjustment (VI-7 Board)

Mode: PLAYBACK
Alignment tape: For operation checking (WR5-3CL)
Frequency counter: Pin③ of CN110

Note: Connect the frequency counter through a buffer with high impedance (approx. 10MΩ) and low capacity (less than 10pF).

[Adjustment Method]

Adjust to 4.433619 ±50Hz with CV101.

2-4-4. 375fH VCO Adjustment (VI-7 Board)

Mode: E-E
Input signals: Colour bar
Digital voltmeter: Pin ㉖ of IC104

[Adjustment Method]

Adjust to 3.00 ±0.05V dc with RV111.

2-4-5. Y Comb AGC Adjustment (VI-7 Board)

Mode: E-E
Input signals: Colour bar
Oscilloscope: Pin ⑨ of IC102

Connect a 22kΩ resistor serially between Pin ⑨ of IC102 and 10:1 probe.

[Adjustment Method]

Adjust to 50 ± 25mVp-p with RV108.

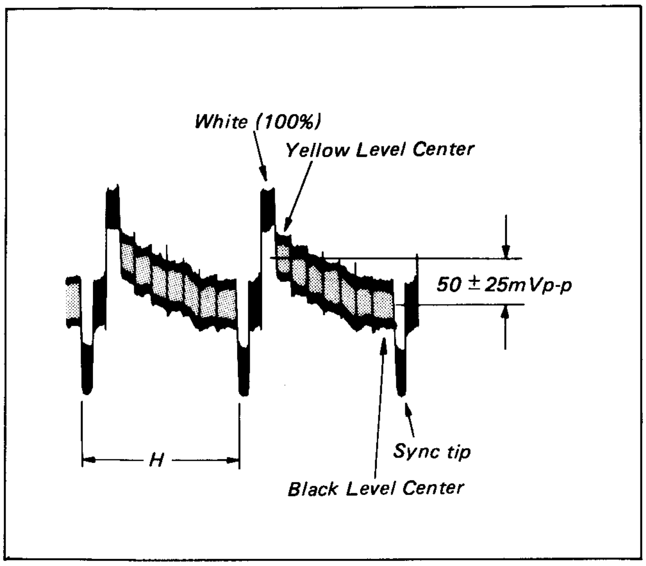

White (100%)
Yellow Level Center
50 ± 25m Vp-p
H
Sync tip
Black Level Center

Fig. 2-11 Y Comb AGC

2-4-6. C Comb AGC Adjustment (VI-7 Board)

Mode: E-E
Input signals: Colour bar
Oscilloscope: Pin ㉖ of IC102 or Pin ③ of CN014 on the EX-3 board.
Connection: Connect Q113 base to REG GND.

[Adjustment Method]

Adjust RV107 and LV103 alternately to minimize residual chroma components.

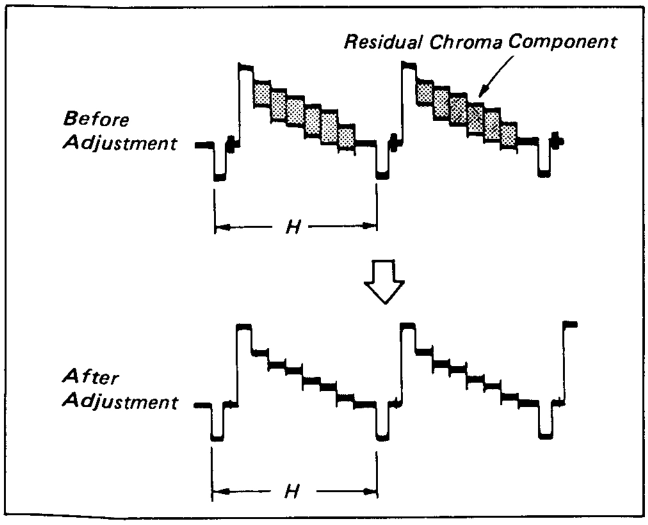

Residual Chroma Component
Before Adjustment
H
After Adjustment
H

Fig. 2-12 C Comb AGC Adjustment

2-4-7. SYNC AGC Adjustment (VI-7 Board)

Mode: E-E
Input signals: Colour bar
Oscilloscope: Pin ㊲ of IC101 or Pin ⑦ of CN014 on the EX-3 board.

[Adjustment Method]

Adjust to 0.5 ±0.01Vp-p with RV102.

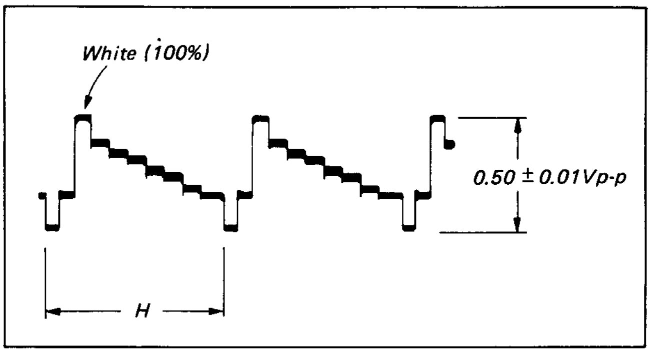

White (100%)
0.50 ± 0.01Vp-p
H

Fig. 2-13 SYNC AGC Adjustment

2-4-8. VIDEO OUT Level Adjustment (VI-7 Board)

Mode: E-E
Input signals: Colour bar
Oscilloscope: TP108 (VIDEO OUT)
An AC adapter or T/T unit must be connected to the multiconnector.

[Adjustment Method]

Adjust to $1.00^{+0.025}_{-0.05}$ Vp-p with RV101.

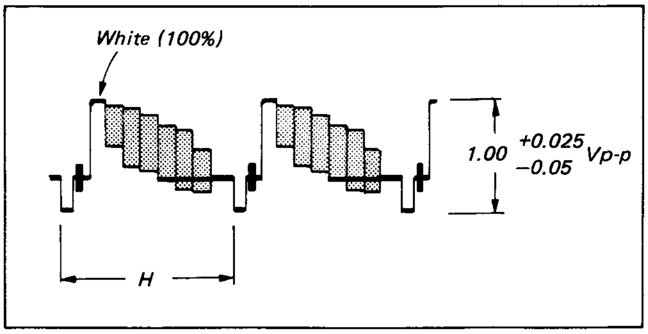

White (100%)
1.00 +0.025 −0.05 Vp-p
H

Fig. 2-14 VIDEO OUT Level Adjustment

2-4-9. PB Y Level Adjustment (VI-7 Board)

Mode: PLAYBACK
Alignment tape: For operation checking, (WR5-3CL) colour bar portion
Oscilloscope: TP108 (VIDEO OUT)
An AC adapter or T/T unit must be connected to the multiconnector.

[Adjustment Method]

Adjust to 1.00 ±0.05Vp-p with RV106.

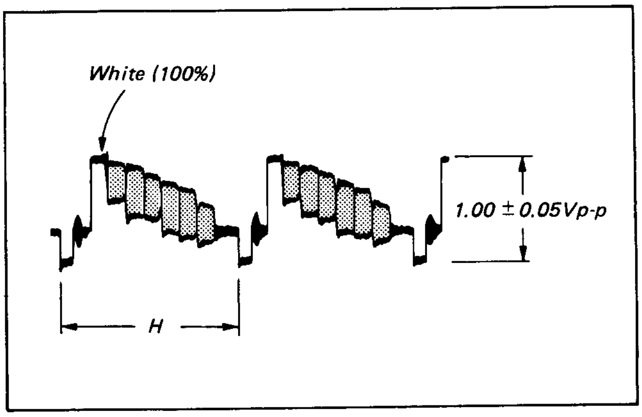


Fig. 2-15 PB Y Level Adjustment

2-4-10. Y FM Carrier Frequency Adjustment (VI-7 Board)

Mode: E-E
Input signal: None
Frequency counter: Pin ⑥ of CN009 (REC Y RF)
Oscilloscope: Pin ⑥ of CN009 (REC Y RF)
Digital voltmeter: The center of RV104 (AC clip) or Pin ㉚ of IC101

[Adjustment Method]

1) Minimize the voltage (approx. 2.4V dc) of Pin ㉚ of IC101 with RV104.
2) Adjust to 4.20 ±0.04MHz with RV103 (Carrier).
3) Check the waveform level.
   Standard: 0.53 ±0.08Vp-p
4) Perform steps required in 2-4-12. AC Clip Adjustment.

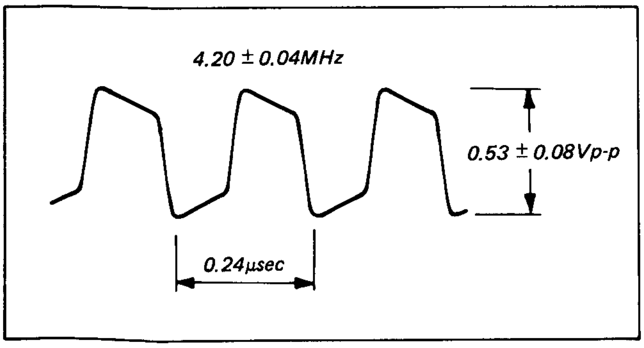


Fig. 2-16 Y FM Carrier Frequency Adjustment

2-4-11. Y FM Deviation Adjustment (VI-7 Board)

Adjustments of VIDEO OUT level, PB Y level, and Y FM carrier frequency must be finished.

Mode: Self-recording and PLAYBACK
Input signals: Colour bar
Oscilloscope: TP108 (VIDEO OUT)
An AC adapter or T/T unit must be connected to the multiconnector.

[Adjustment Method]

1) Record colour bar signals.
2) Play back recorded portions.
3) Check the playback output level.
   Standard: 1.00 ±0.04Vp-p
4) Rotate RV105 as follows and repeat Steps 1) through 3) when the value does not satisfy the standard.

	RV105 rotation direction seen from component side
Larger than standard value	Clockwise (↷)
Smaller than standard value	Counterclockwise (↶)

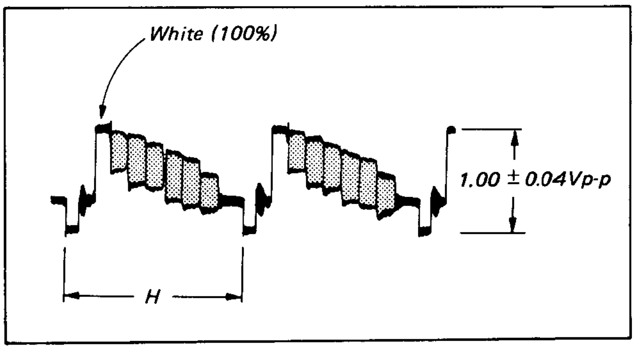


Fig. 2-17 Y FM Deviation Adjustment

2-4-12. AC Clip Adjustment (VI-7 Board)

Mode: E-E
Input signals: Colour bar
Oscilloscope: Pin ㉔ of IC101

[Adjustment Method]

Adjust the peak of white (100%) portion to 250 ±10% with RV104.

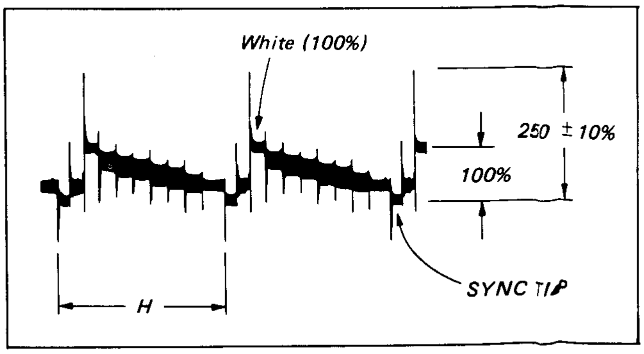


Fig. 2-18 AC Clip Adjustment

2-4-13. Carrier Balance Adjustment (VI-7 Board)

Mode: E-E
Input signals: Colour bar
Oscilloscope: Pin ㊵ of IC104

[Adjustment Method]

Minimize the 5.17MHz component with RV109.

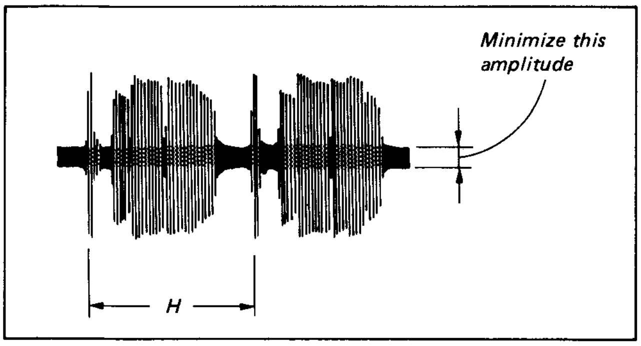


Fig. 2-19 Carrier Balance Adjustment

2-4-14. Chroma Emphasis fo Adjustment (VI-7 Board)

Mode: E-E
Input signals: Colour bar
Oscilloscope: Pin ⑪ of IC103

[Adjustment Method]

Minimize the amplitude of the flat portions of chroma signals with FL102.

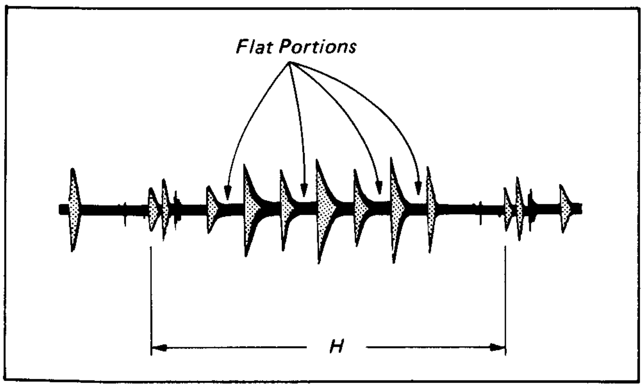


Fig. 2-20 Chroma Emphasis fo Adjustment

2-4-15. REC C RF Trap Adjustment (VI-7 and AR-5 Boards)

Mode: E-E
Input signals: None
Oscilloscope: Pin ② of CN009 on the VI-7 board
Frequency counter: Pin ⑬ of IC401 on the AR-5 board
Connection: Connect Pin ㊵ of IC104 on the VI-7 board and Pin ⑭ of IC401 on the AR-5 board using a 0.01μF capacitor.

[Adjustment Method]

1) Adjust RV402 on the AR-5 board so that the AFM Carrier Frequency is 1.41 ±0.01MHz.
2) Minimize the residual 1.41MHz component of Pin ② of CN009 with LV102 on the VI-7 board.
3) Adjust RV402 on the AR-5 board so that the AFM Carrier Frequency is 1.500 ±0.002MHz.

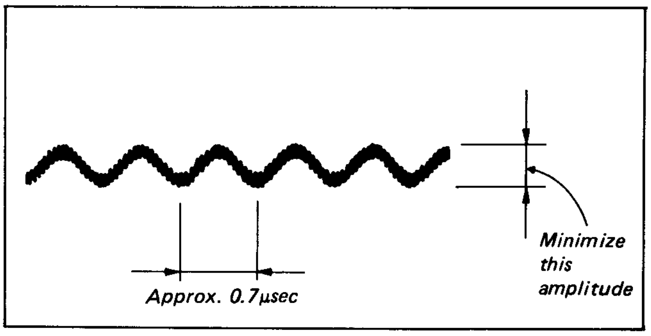


Fig. 2-21 REC C RF Trap Adjustment

2-4-16. fH VCO Adjustment (VI-7 Board)

Mode: E-E
Input signals: Colour bar
Oscilloscope: CH1: Pin ⑬ of IC108
CH2: TP121 (VIDEO IN)

[Adjustment Method]

1) Adjust RV112 so that the Tʀ of CH1 is 16.0 ±0.5μsec.
2) Confirm that the H (time) of CH1 and CH2 is stable.

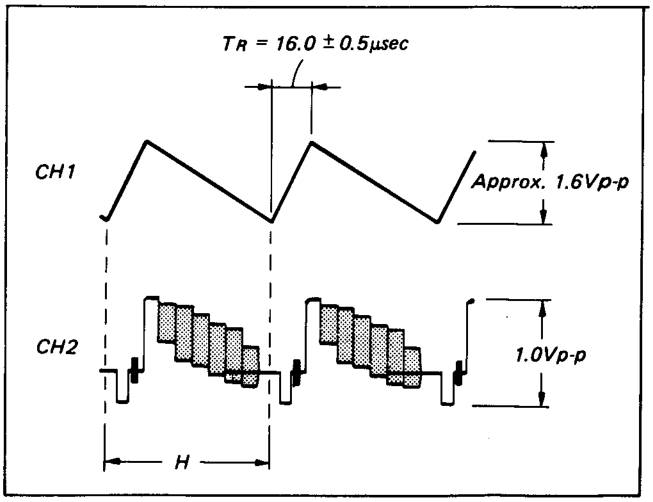


Fig. 2-22 f_H VCO Adjustment

2-4-17. GCA GAIN Adjustment (VI-7 Board)

Mode: PLAYBACK PAUSE
Alignment tape: For operation checking (WR5-3CL) colour bar portion
Oscilloscope: TP108 (VIDEO OUT)

[Adjustment Method]

Adjust RV113 so that the burst signal is 290mVp-p.

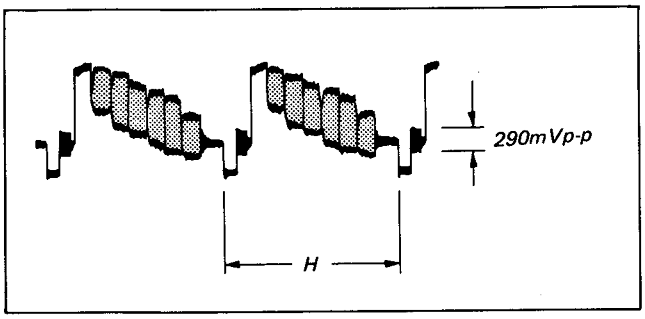


Fig. 2-23 GCA GAIN Adjustment

2-4-18. REC Y Recording Current Adjustment (AR-5 Board)

Mode: RECORD
Tape: MP type (Pin ③ of CN009 shall be approx. 5V dc.)
Input signals: None
Oscilloscope: TP102
Connection: Connect the following three places with jumper wires.
Pin ② of CN009 (REC C RF) – REG GND
Pin ⑥ of CN008 (REC ATF RF) – REG GND
Terminal of RV104 (REC AFM ADJ) on the R125 side – REG GND

[Adjustment Method]

Adjust to 160mVp-p with RV101.

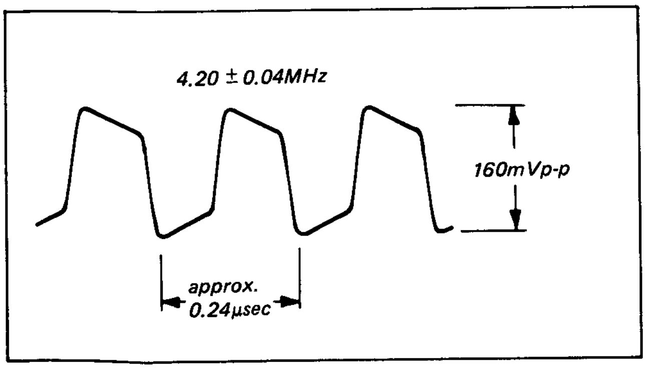


Fig. 2-24 REC Y Recording Current Adjustment

2-4-19. REC C Recording Current Adjustment (AR-5 Board)

Mode: RECORD
Tape: MP type (Pin ③ of CN009 shall be approx. 5V dc.)
Input signal: Colour bar
Oscilloscope: TP102 Do not use a 10:1 probe if the signal level is too small and is difficult to read. Connect directly using a 100Ω resistor as shown below.

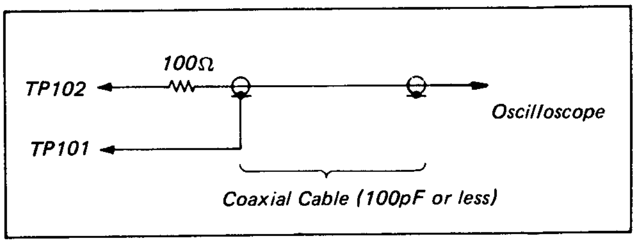


Fig. 2-25

Connection: Connect the following three locations using jumper wires.
Pin ⑥ of CN009 (REC Y RF) – REG GND
Pin ⑥ of CN008 (REC ATF RF) – REG GND
Terminal of RV104 (REC AFM ADJ) on the R125 side – REG GND

[Adjustment Method]

1) Rotate RV104 (REC AFM ADJ) to maximize the chroma signal level.
2) Adjust the red level to 30mVp-p with RV105 (REC C ADJ).
3) Make REC ATF and AFM recording current adjustments as required in 2-4-20 and 2-5-3, respectively.

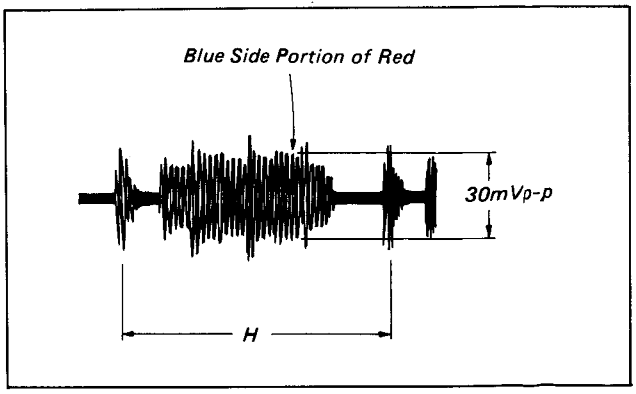


Fig. 2-26 REC C Recording Current Adjustment

2-4-20. REC ATF Recording Current Adjustment (AR-5 Board)

Mode: RECORD

Tape: MP type (Pin ③ of CN009 shall be approx. 5V dc.)

Input signals: Colour bar

Oscilloscope: TP102 Do not use a 10:1 probe if the signal level is too small and is difficult to read. Connect directly using a 100Ω resistor as shown below.

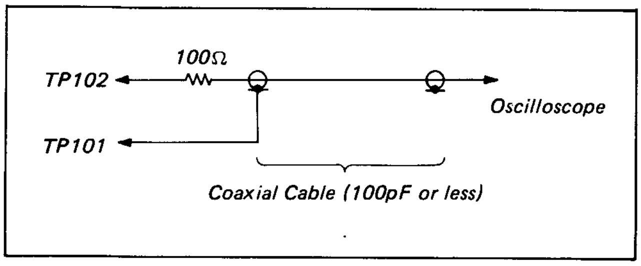

100Ω
TP102
Oscilloscope
TP101
Coaxial Cable (100pF or less)

Fig. 2-27

Connection: Connect the following three locations using jumper wires.
Pin ⑥ of CN009 (REC Y RF) – REG GND
Pin ② of CN009 (REC C RF) – REG GND
Terminal of RV104 (REC AFM ADJ) on R125 side – REG GND

[Adjustment Method]

1) Adjust RV104 (REC AFM ADJ) to the mechanical center.
2) Adjust to 6.0mVp-p with RV103 (REC ATF ADJ).
3) Perform steps mentioned in 2-5-3. AFM Recording Current Adjustment.

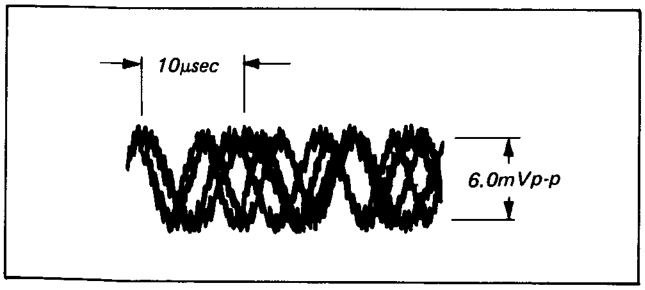


Fig. 2-28 REC ATF Recording Current Adjustment

2-5. AUDIO SYSTEM ADJUSTMENT

Connection of audio measuring instruments

Connect audio-system measuring instruments as shown below in addition to video system measuring instruments.

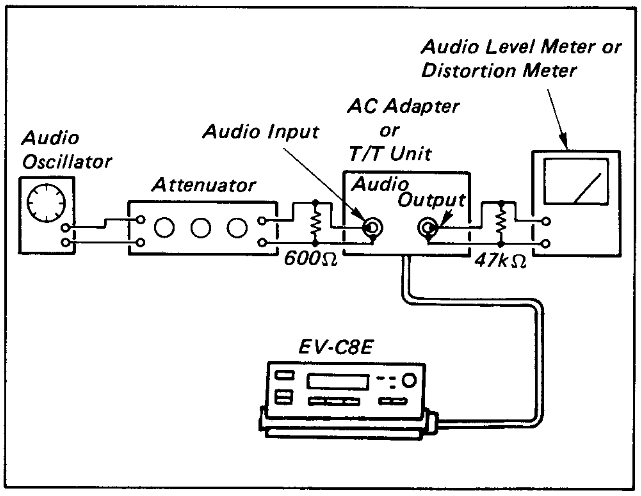

Audio Level Meter or Distortion Meter
AC Adapter or T/T Unit
Audio Oscillator
Audio Input
Attenuator
Audio Output
600Ω
47kΩ
EV-C8E

Fig. 2-29

[Adjustment Procedure]

1) AFM carrier frequency adjustment
2) AFM deviation adjustment
3) AFM recording current adjustment
4) E-E output level check
5) Overall level characteristic check
6) Overall distortion factor check
7) Overall noise level check

2-5-1. AFM Carrier Frequency Adjustment (AR-5 Board)

Mode: RECORD

Audio input signals: None

Frequency counter: Pin ⑬ of IC401

[Adjustment Method]

Adjust to 1.500 ±0.002MHz with RV402.

2-5-2. AFM Deviation Adjustment (AR-5 Board)

Mode: PLAYBACK

Playback tape: For operation checking (WR5-3CL)

[Adjustment Method]

Adjust the audio output level to –6.5 ±0.2dBs with RV401.

2-5-3. AFM Recording Current Adjustment (AR-5 Board)

Mode: RECORD
Tape: MP type (Pin ③ of CN009 shall be approx. 5V dc.)
Audio input signals: None
Oscilloscope: TP102 Do not use a 10:1 probe if the signal level is too small and is difficult to read. Connect directly using a 100Ω resistor as shown below.

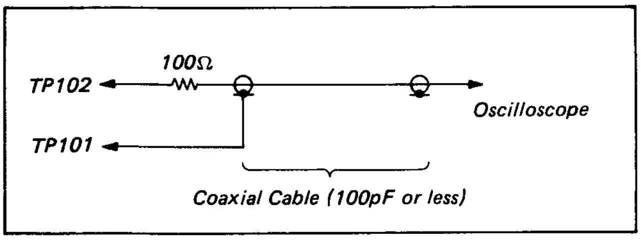


Fig. 2-30

Connection: Connect the following three locations using jumper wires.

Pin ⑥ of CN009 (REC Y RF) – REG GND
Pin ② of CN009 (REC C RF) – REG GND
Pin ⑥ of CN008 (REC ATF RF) – REG GND

[Adjustment Method]

Adjust to 7.0mVp-p with RV104.

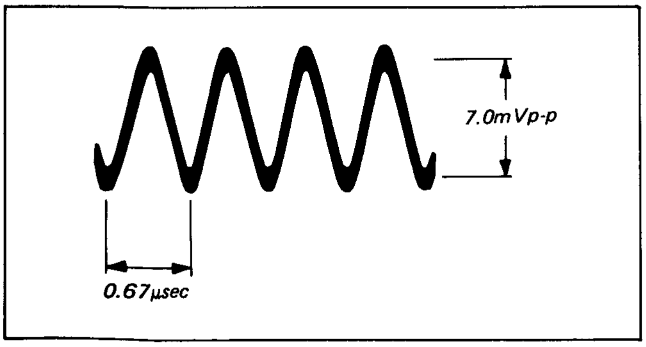


Fig. 2-31 AFM Recording Current Adjustment

2-5-4. E-E Output Level Check

Mode: E-E or RECORD
Audio input signals: 400Hz, –6dBs

[Checking Method]

The audio output level must be –6 ±2dBs.

2-5-5. Overall Level Characteristic Check

Mode: Self-recording and PLAYBACK (LP)
Tape: MP type
Audio input signals: 400Hz, –6dBs

[Checking Method]

1) Record.
2) Play back recorded portions.
3) The audio output level must be –6 ±3dBs.

2-5-6. Overall distortion Check

Mode: Self-recording and PLAYBACK (LP)
Tape: MP type
Audio input signals: 400Hz, –6dBs

[Checking Method]

1) Record.
2) Play back recorded portions.
3) The distortion must be less than 1.0% (0.5% when using a filter ohown below).

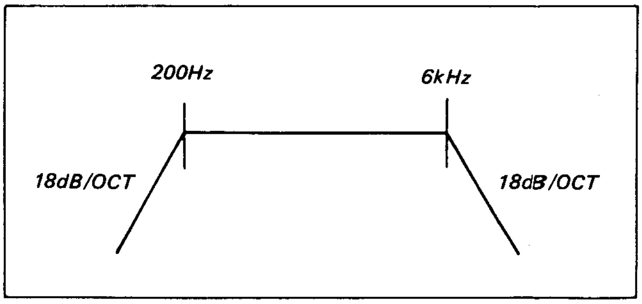


Fig. 2-32 Distortion Measurement Filter

2-5-7. Overall Noise Level Check

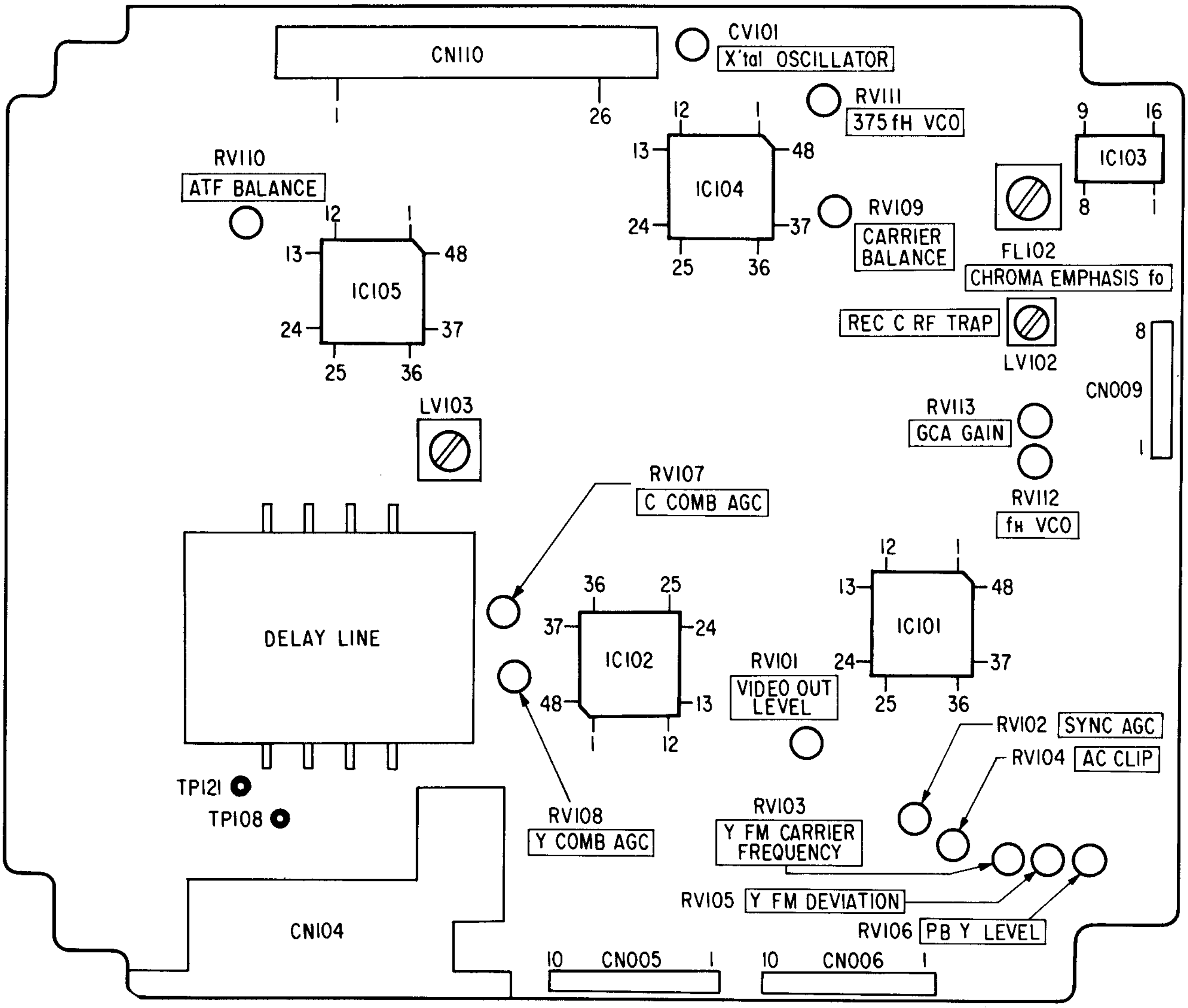
Mode: Self-recording and PLAYBACK (LP)
Tape: MP type
Audio input signals: None (Short audio input terminal)

[Checking Method]

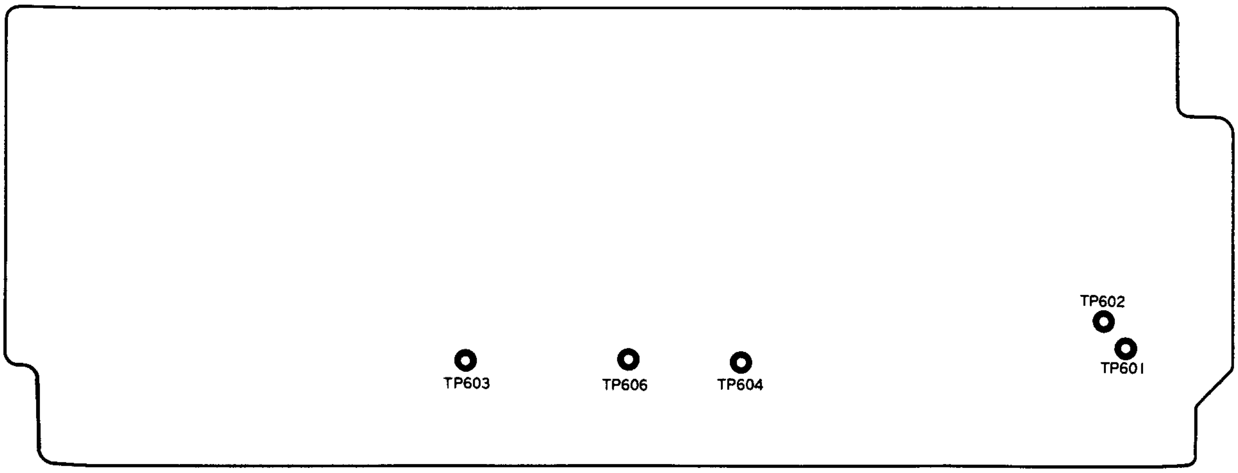
1) Record.
2) Play back recorded portions.
3) The noise level must be less than –66dBs.

5. RV AND TP LOCATION

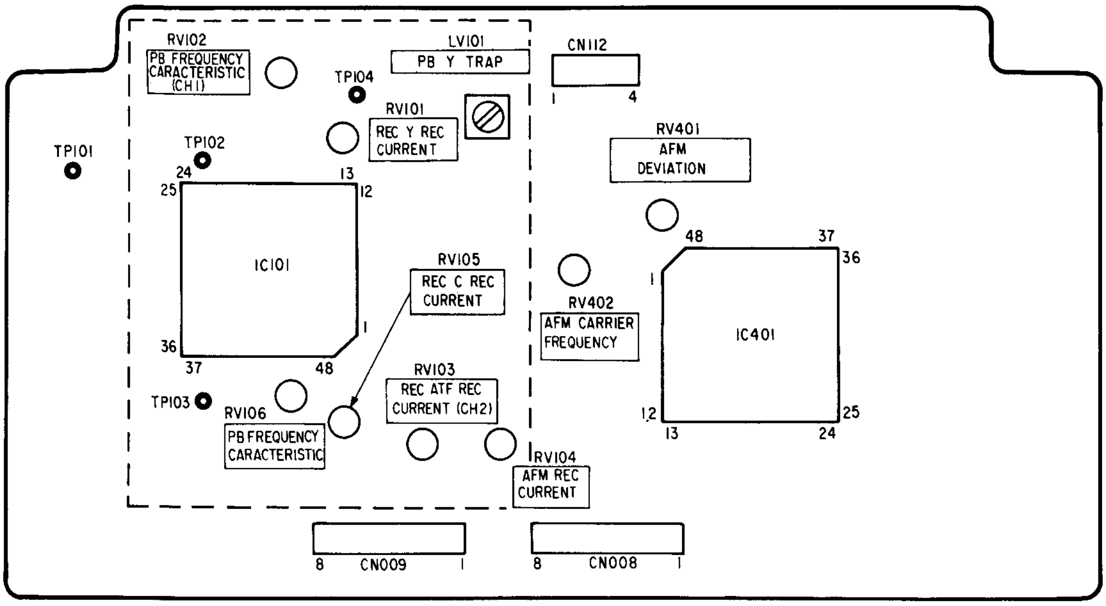
VI-7 Board (Component Side)


CN110
1
26
CV101
X'tal OSCILLATOR
RV111
375fH VCO
12
1
13
48
IC104
24
37
25
36
RV109
CARRIER BALANCE
9
16
IC103
8
1
FL102
CHROMA EMPHASIS fo
REC C RF TRAP
LV102
8
CN009
1
RV110
ATF BALANCE
12
1
13
48
IC105
24
37
25
36
LV103
RV113
GCA GAIN
RV112
fH VCO
RV107
C COMB AGC
DELAY LINE
36
25
37
24
IC102
48
13
1
12
12
1
13
48
IC101
24
37
25
36
RV101
VIDEO OUT LEVEL
RV102
SYNC AGC
RV104
AC CLIP
TP121
TP108
RV108
Y COMB AGC
RV103
Y FM CARRIER FREQUENCY
RV105
Y FM DEVIATION
RV106
PB Y LEVEL
CN104
10
CN005
1
10
CN006
1

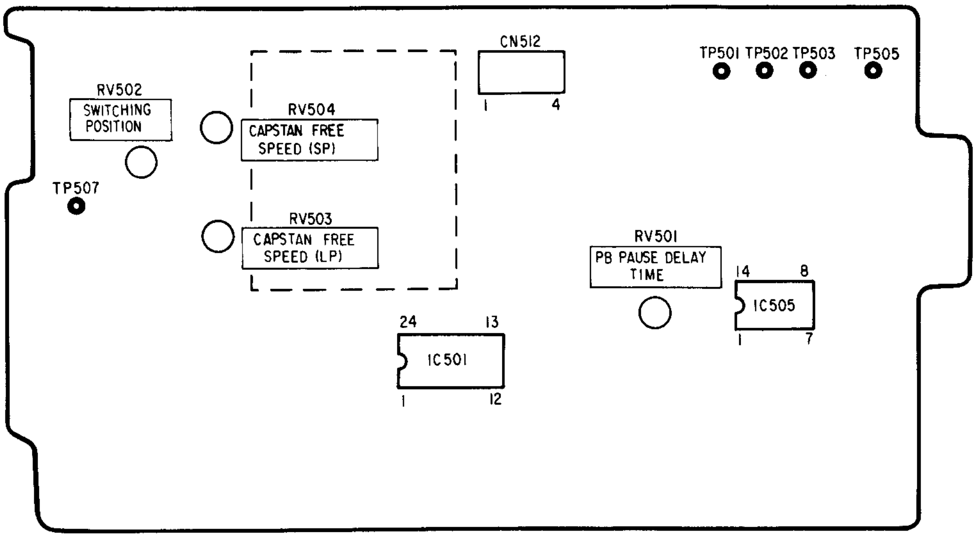
SK-6 Board (Component Side)


TP602
TP601
TP603
TP606
TP604

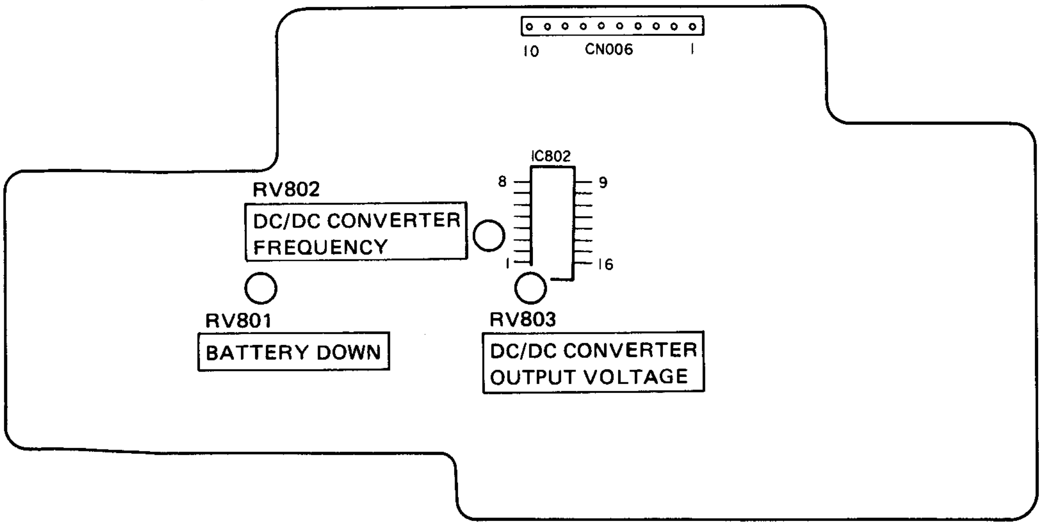
AR-5 Board (Component Side)


RV102
PB FREQUENCY CARACTERISTIC (CH1)
LV101
PB Y TRAP
CN112
1
4
TP104
RV101
REC Y REC CURRENT
TP101
TP102
24
13
25
12
IC101
36
1
37
48
RV105
REC C REC CURRENT
RV401
AFM DEVIATION
48
37
36
1
RV402
AFM CARRIER FREQUENCY
IC401
12
25
13
24
RV103
REC ATF REC CURRENT (CH2)
TP103
RV106
PB FREQUENCY CARACTERISTIC
RV104
AFM REC CURRENT
8
CN009
1
8
CN008
1

SV-14 Board (Solder Side)

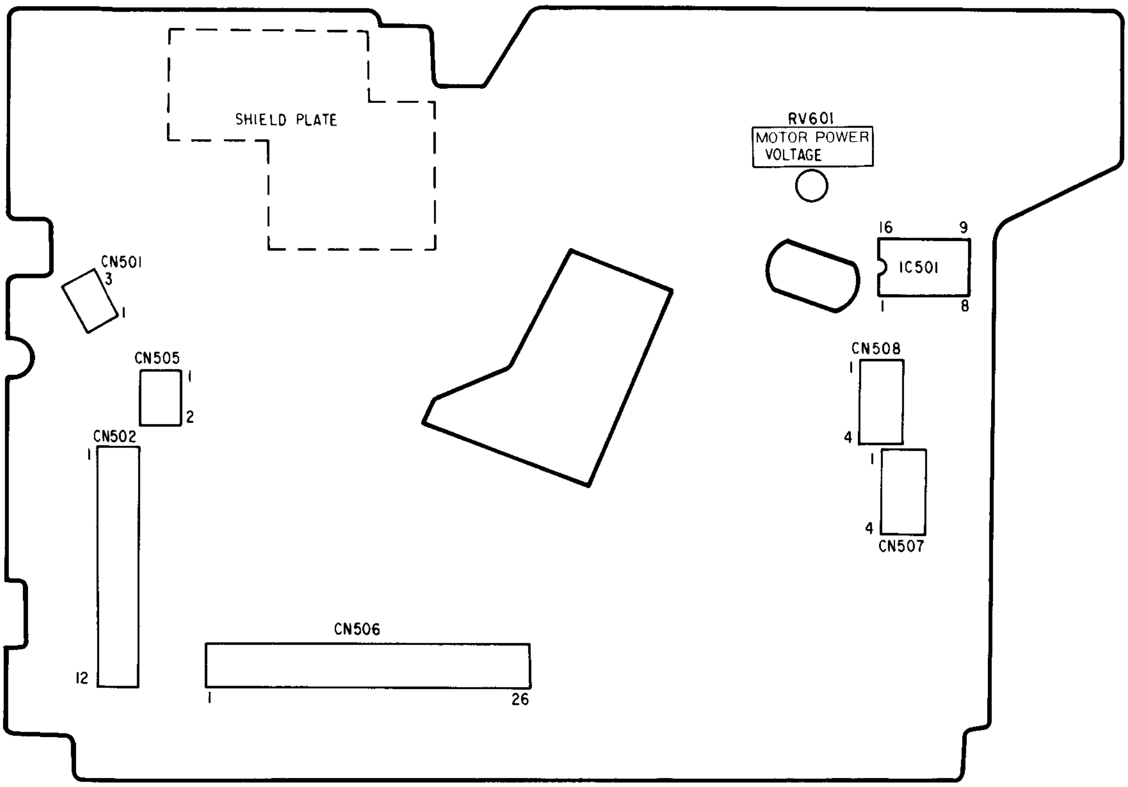

CN512
1
4
TP501
TP502
TP503
TP505
RV502
SWITCHING POSITION
RV504
CAPSTAN FREE SPEED (SP)
TP507
RV503
CAPSTAN FREE SPEED (LP)
RV501
PB PAUSE DELAY TIME
14
8
IC505
1
7
24
13
IC501
1
12

HD-5 Board (Component Side)


10
CN006
1
IC802
8
9
1
16
RV802
DC/DC CONVERTER FREQUENCY
RV801
BATTERY DOWN
RV803
DC/DC CONVERTER OUTPUT VOLTAGE

The IC802 is mounted on the soldering side

MC-8 Board (Solder Side)


SHIELD PLATE
RV601
MOTOR POWER VOLTAGE
16
9
IC501
1
8
CN501
3
1
CN505
1
2
CN502
1
12
CN508
1
4
1
4
CN507
CN506
1
26

EV-C8E

English
85J0472-1
Printed in Japan
© 1985

9-972-423-01

Sony Corporation

Optional accessories
Tuner timer unit TT-V8EC/V8UB/V8AS, AC power adaptor AC-V8E/V8UB, Battery pack NP-22, DC pack DCP-85, Car battery cord DCC-16AE, Remote Commander RM-84, Cable VMC-262M, VMC-2104M, VMC-600M/601M, VMC-602MS/603MS

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

EV-C8E

SONY®

SERVICE MANUAL

AEP Model
UK Model
E Model

March, 1986

CORRECTION-1

File this Correction-1 with the service manual.

MICROFILM

Consumer
VIDEO

☛ : corrected portion

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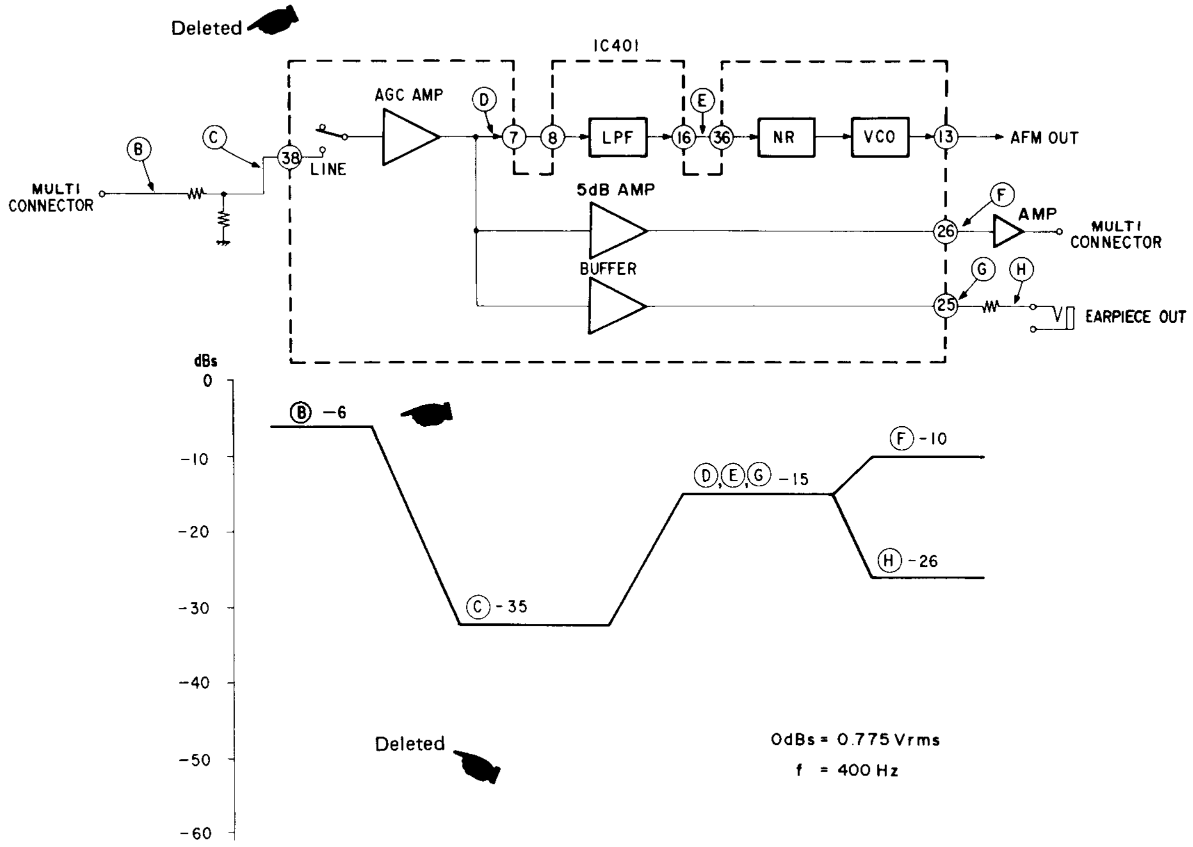
3-5. AUDIO LEVEL DIAGRAM


Deleted ☛
IC401
AGC AMP
Ⓓ
Ⓔ
Ⓑ
Ⓒ
MULTI CONNECTOR
38
LINE
7
8
LPF
16
36
NR
VCO
13
AFM OUT
5dB AMP
Ⓕ
AMP
26
MULTI CONNECTOR
BUFFER
Ⓖ
Ⓗ
25
EARPIECE OUT
dBs
0
-10
-20
-30
-40
-50
-60
Ⓑ -6
☛
Ⓕ -10
Ⓓ,Ⓔ,Ⓖ -15
Ⓗ -26
Ⓒ -35
Deleted ☛
0dBs = 0.775 Vrms
f = 400 Hz

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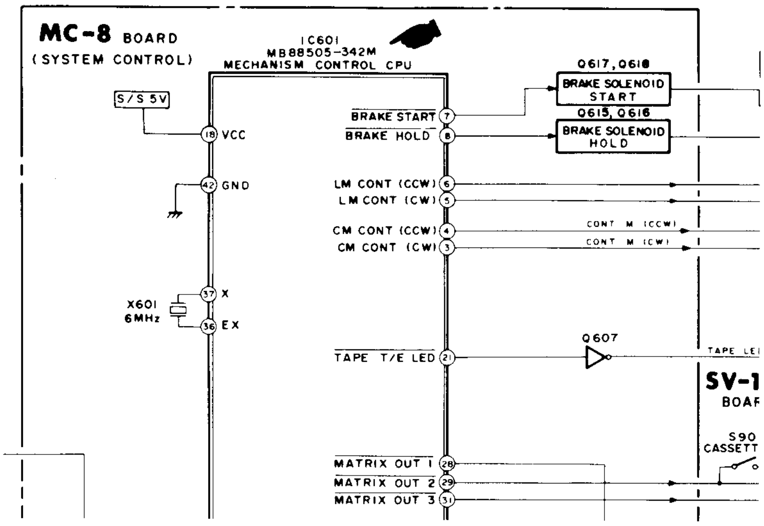
3-7. SYSTEM CONTROL BLOCK DIAGRAM


MC-8 BOARD
(SYSTEM CONTROL)
IC601
MB88505-342M
MECHANISM CONTROL CPU
☛
S/S 5V
18 VCC
42 GND
X601
6MHz
37 X
36 EX
BRAKE START 7
BRAKE HOLD 8
Q617, Q618
BRAKE SOLENOID START
Q615, Q616
BRAKE SOLENOID HOLD
LM CONT (CCW) 6
LM CONT (CW) 5
CM CONT (CCW) 4
CM CONT (CW) 3
CONT M (CCW)
CONT M (CW)
TAPE T/E LED 21
Q607
TAPE LE
SV-1
BOAF
S90
CASSETT
MATRIX OUT 1 28
MATRIX OUT 2 29
MATRIX OUT 3 31

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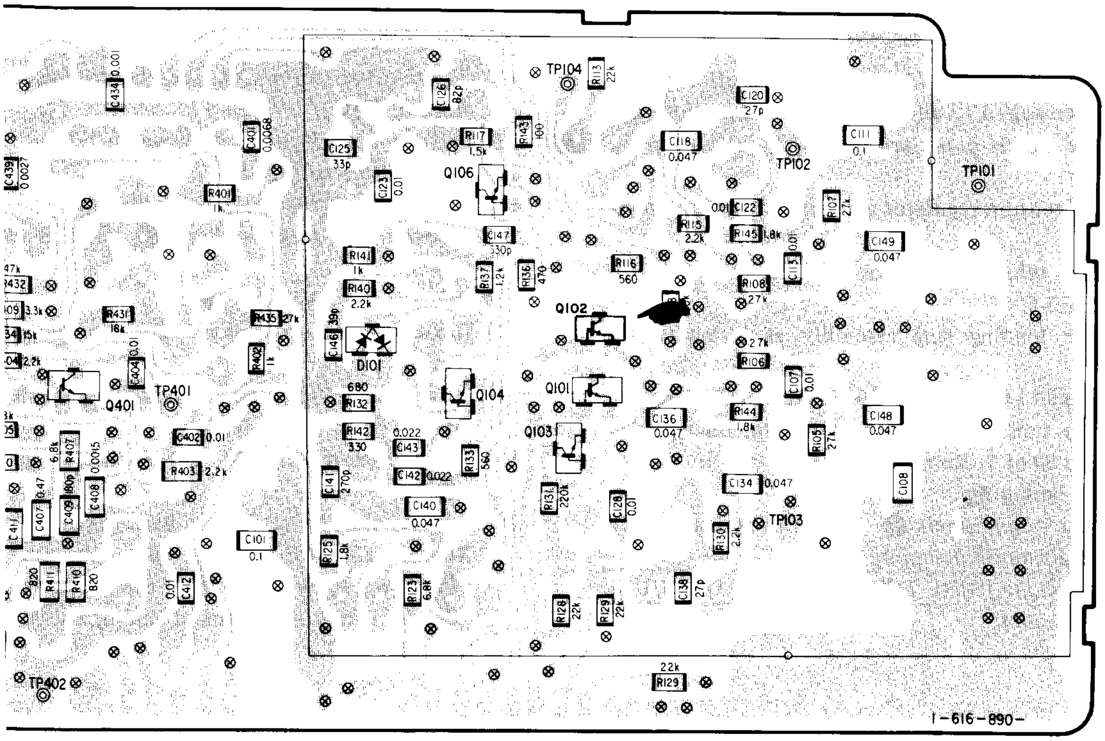
AR-5 BOARD(SOLDER SIDE)


TP104
R113 22k
C126 82p
R117 1.5k
R143 100
C120 27p
C118 0.047
TP102
C111 0.1
TP101
C434 0.001
C401 0.0068
C439 0.0027
R401 1k
C125 33p
C123 0.01
Q106
C122 0.01
R115 2.2k
R145 1.8k
R107 2.7k
C149 0.047
C147 330p
R141 1k
R137 1.2k
R136 470
R116 560
C113 0.01
R108 27k
R432
R140 2.2k
Q102
R109 3.3k
R431 18k
R435 27k
R402 1k
C146 39p
D101
C404 0.01
Q401
TP401
680
R132
Q104
Q101
R106 2.7k
C107 0.01
R142 330
C143 0.022
Q103
C136 0.047
R144 1.8k
R105 27k
C148 0.047
C402 0.01
R403 2.2k
R407 6.8k
0.0015
C141 270p
C142 0.022
R133 560
R131 220k
C134 0.047
C108
C140 0.047
C128 0.01
TP103
R130 2.2k
C407 0.47
C409 680p
C408
C101 0.1
R125 1.8k
C411
R411 820
R410 820
C412 0.01
R123 6.8k
R128 22k
R129 22k
C138 27p
22k
R129
TP402
1-616-890-
11

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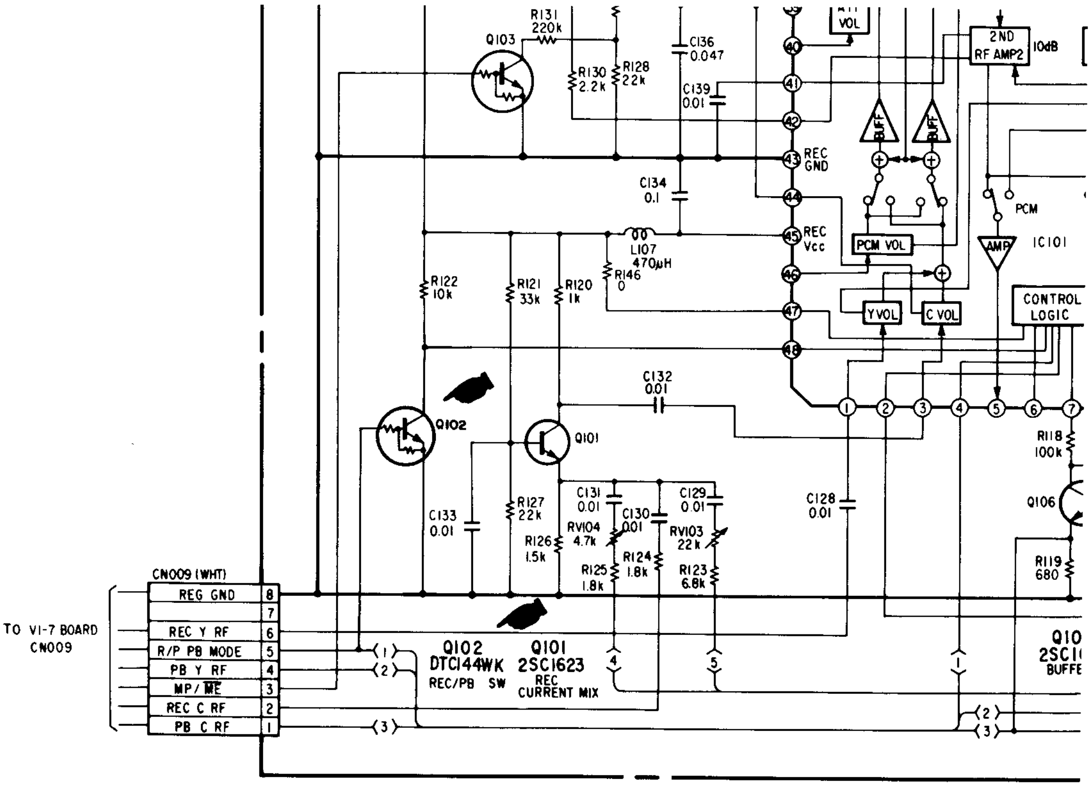
AR-5 BOARD


R131 220k
Q103
R130 2.2k
R128 22k
C136 0.047
C139 0.01
VOL
2ND RF AMP2
10dB
40
41
42
43 REC GND
44
45 REC Vcc
46
47
48
BUFF
BUFF
PCM
PCM VOL
AMP
IC101
C134 0.1
L107 470μH
R146 0
R122 10k
R121 33k
R120 1k
Y VOL
C VOL
CONTROL LOGIC
C132 0.01
1 2 3 4 5 6 7
R118 100k
Q102
Q101
Q106
C133 0.01
R127 22k
C131 0.01
C130 0.01
C129 0.01
RV104 4.7k
RV103 22k
R126 1.5k
R124 1.8k
R125 1.8k
R123 6.8k
C128 0.01
R119 680
CN009 (WHT)
REG GND 8
7
REC Y RF 6
R/P PB MODE 5
PB Y RF 4
MP/ME 3
REC C RF 2
PB C RF 1
TO VI-7 BOARD CN009
(1)
(2)
(3)
Q102 DTC144WK REC/PB SW
Q101 2SC1623 REC CURRENT MIX
Q10 2SC1 BUFFE
4
5
1
(2)
(3)

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1-3-15. M Slider

1. Removal

1) Open the MC-8 Board as instructed in section 2 disassembly (See page 17.) and remove the timing belt ❶.
2) Remove the pinch press arm assembly as instructed in 1-3-3.
3) Remove the tension regulator arm assembly as instructed in 1-3-4.
4) Remove the tension regulator band assembly as instructed in 1-3-5.
5) Remove the loading ring assembly as instructed in 1-3-7.
6) Perform Steps 1) to 6) of 1-3-14 (1. Removal). ☚
7) Remove the tension regulator load arm assembly as instructed in 8) of 1. Removal in 1-3-11.
8) Remove the spring ❷.
9) Remove two stop washers ❸ , S main brake assembly ❹ and T main brake assembly ❺ .
10) Set up the LOADING TOP and LOADING/UNLOADING modes.
11) Remove two screws ❻ and the driving arm complete assembly ❼ .
12) ☛ Perform Step 8) of 1. Removal in 1-3-14.
13) Remove two springs ❽ .
14) Remove the REW brake assembly ❾ .
15) Remove the stop washer ❿ and B release slider ⓫ .
16) Remove the RVS arm ⓬ .
17) Remove the stop washer ⓭ , spring ⓮ , and RL arm ⓯ .
18) Move the M slider ⓰ toward the right (leave approximately 5mm on the left).
19) Remove the E ring ⓱ and pinch press lever assembly ⓲ .
20) Remove the spring ⓳ and hard brake (S) ⓴ .
21) Remove the stop washer ㉑ , push the mode arm ㉒ toward the arrow Ⓐ , then remove the M slider ⓰ by lifting the lefthand side of the M slider ⓰ . (See Fig. 1-43.)

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☛ 2. Remounting

1) Grease the slider. (See Fig. 1-44.)
2) Push the mode arm ㉒ in the arrow Ⓐ direction, remount the M slider ⓰ referring to Fig. 1-45 and paying attention to the vertical position relationship with other portions of the slider, and refit the stop washer ㉑ . (See Fig. 1-43.)
3) Remount the hard brake (S) ⓴ and rehook the spring ⓳ .
4) Grease as shown in Fig. 1-46.
5) Oil half a drop of oil on the parts below the spindle ㉓ groove, mount the pinch press lever assembly ⓲ , and refit the E ring ⓱ .
6) Remount the RL arm ⓯ , rehook the spring ⓮ , and refit the stop washer ⓭ .
7) Remount the RVS arm ⓬ .
8) Remount the B release slider ⓫ and refit the stop washer ❿ .
9) Remount the REW brake assembly ❾ .
10) Rehook two springs ❽ .

Note: Rehook two springs as noted below so as not to misplace them.
The spring for the B release slider
outside diam: 2mm, wire diam: 0.18mm
The spring for the REW ass'y
outside diam: 1.6mm, wire diam: 0.12mm

11) Move the M slider ⓰ fully to the left.
12) Set up the EJECT mode.
13) Perform Steps 7), 8) and 9) of 2. Remounting in 1-3-14.
14) Set up the LOADING/UNLOADING mode.
15) Insert the horizontal spindle of the driving arm complete assembly ❼ in the groove of the upper & lower selection arm (B) ㉔ , insert the lug of the RVS arm ⓬ in the dented part of the driving arm complete assembly ❼ , and tighten two screws ❻ .
16) Remount the T main brake assembly ❺ and S main brake assembly ❹ , refit two each stop washers ❸ , and refit the spring ❷ . (See Fig. 1-43.)
17) Remount the tension regulator load arm assembly as instructed in 2) of 2. Remounting in 1-3-11.
18) Perform Steps 11) to 16) of 2. Remounting in 1-3-14.
19) Remount the loading ring assembly as instructed in 1-3-7.
20) Remount the tension regulator band assembly as instructed in 1-3-5.
21) Remount the tension regulator arm assembly as instructed in 1-3-4.
22) Remount the pinch press arm assembly as instructed in 1-3-3.
23) Open the MC-8 Board referring to section 2 disassembly (See page 17.) and remount the timing belt ❶ .

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